SOREL® Mikroelektronik GMBH

CATALOGUE
2015

THERMAL CONTROL MADE SIMPLE

DEAR SOREL-CUSTOMER

In the last years, we have continuously extended our product portfolio for your applications. No matter if solar, heating, fresh water, storage loading or pool controllers - they always build on our renown user-friendy operator guidance.

Nevertheless, we managed to keep this year's catalogue lean and clear. Now that high-efficiency pumps steadily replace standard pumps, we focus on speed-control of these HE-pumps via 0-10V/PWM-outputs. Accordingly, the solar controllers for speed-control of standard pumps are no longer listed. But don't worry: they will remain available as long as they are being used.

Our development department also put strong emphasis on SOREL Connect – Analysis. Monitoring. Remote Control. An easy-to-install plug & play-solution which enables the consumer to see and adjust his heating system with his smartphone, tablet or PC anywhere anytime. This comes down to improved energy-efficiency, security of energy supply and a higher comfort level – and the customer carries his heating controller in his pocket.

Last but not least, I would like to give you a special tip: for every SOREL controller there is a 1:1 simulation for PC which enables you to gain quick and easy insight into his operator guidance and control behavior. Moreover, it has proven to be very helpful for product trainings and technical support. For our customers, this tool is absolutely free of charge. Request your PC-simulation via info@sorel.de and get to know our easy-to-use controllers!

We are looking forward to your enquiry and are happy to collaborate with you in the future!

Georg Bicher, CEO

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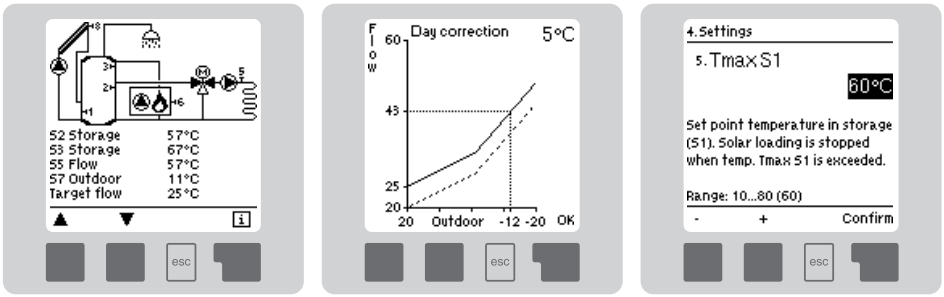
ADVANTAGES

8 reasons for SOREL

INTUITIVE OPERATOR GUIDANCE

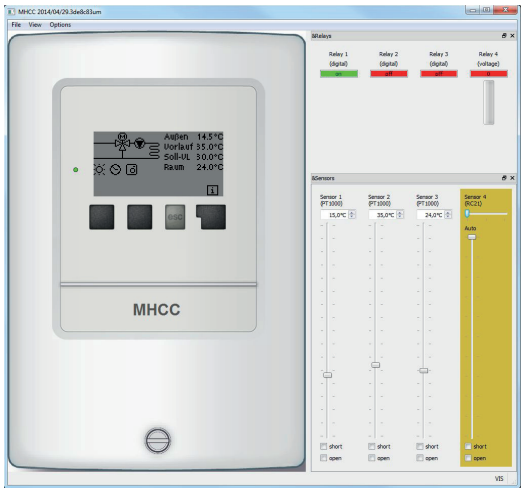


Self-explanatory full text menu for quick understanding.

LOCAL SUPPORT

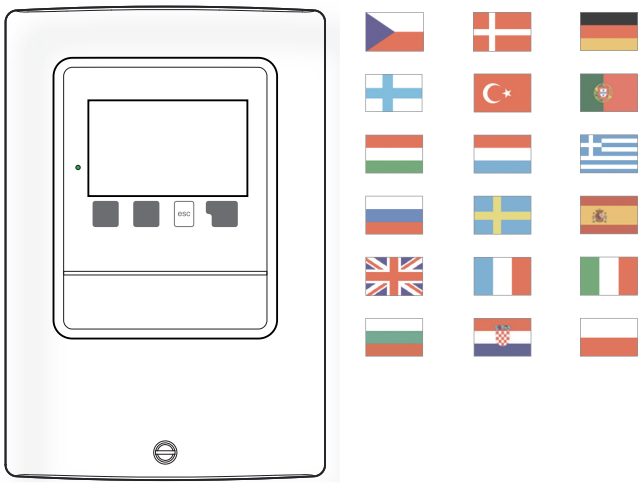
Qualified technical support in 30 countries to answer your questions.

PC SIMULATION



Handy tool for marketing, training and self-study.

MULTILINGUALISM



Convenient operating in your native language, great export opportunities.

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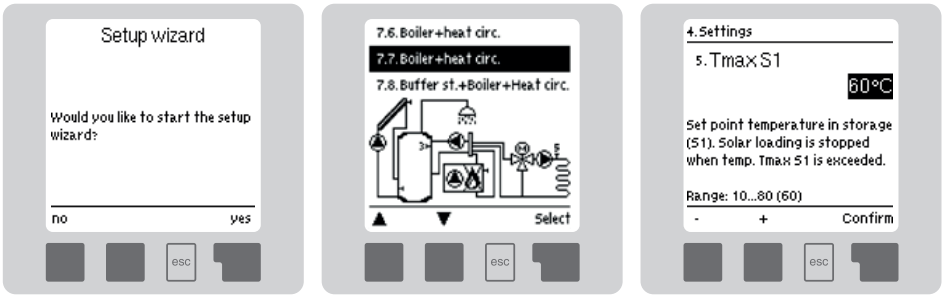
ADVANTAGES

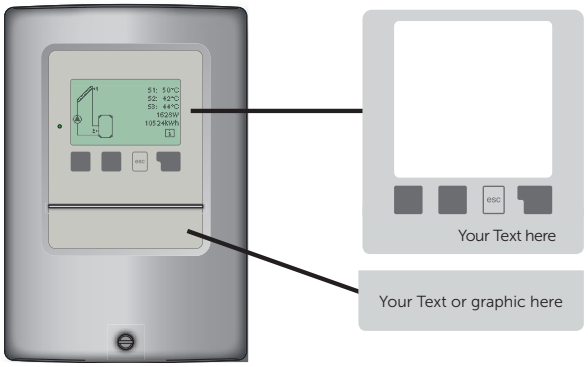
8 reasons for SOREL

SETUP WIZARD



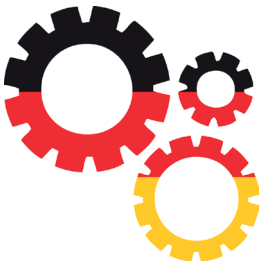
Guided setup for quick and easy commissioning.

OEM-CUSTOMIZATION



Easy adaption of the product and its parts to your brand.

GERMAN QUALITY

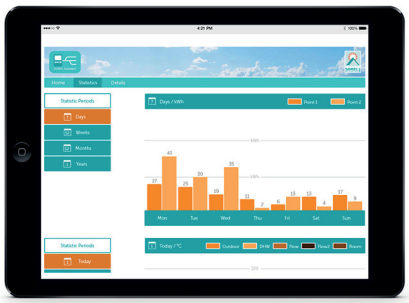


Well-thought, reliable and durable

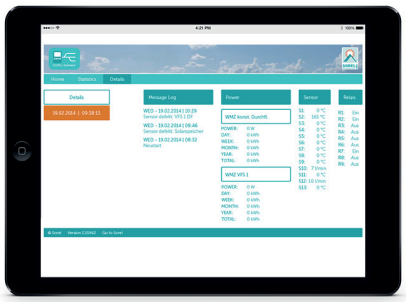
SOREL CONNECT

SOREL Connect is the new Plug & Play concept which does not require any particular network skills. Using a CAN-bus interface, the controllers can communicate with each other, or be connected with local networks or the Internet via Ethernet. The user can monitor and remote control his heating system by PC, tablet and smartphone - anywhere, anytime. SOREL Connect controllers are marked by the logo on the left.

System Overview with Remote Control Panel



Energy Statistics



Technical Details for the Expert

Temperature Difference Controllers TDC

Overview

TDC	STDC	MTDC	LTDC	XTDC
Sensor inputs	3	4	6	8
Relay outputs 230V	1	2	3	7
Relay output voltage-free	×	×	×	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1	1	2	2
Number of applications	9	25+	42+	48+
Extension of pre-defined systems by selectable additional functions	×	✓	✓	✓
LEDs red/green for display of operating status	×	✓	✓	✓
Statistics and graphic analysis of data memory	✓	✓	✓	✓
Flow based heat metering via Grundfos direct sensor (VFS)	×	×	2	2
Pressure monitoring (Grundfos RPS sensor)	×	×	2	2
Battery-backed Real Time Clock	✓	✓	✓	✓
Time and temperature-controlled thermostat function	✓	✓	✓	✓
Legionella protection via solar	✓	✓	✓	✓
Legionella protecion via additional heating	✓	✓	✓	✓
Cooling function	✓	✓	✓	✓
Setup wizard	✓	✓	✓	✓
System protection	✓	✓	✓	✓
Collector protection	✓	✓	✓	✓
Storage protection	✓	✓	✓	✓
Anti-freeze protection	✓	✓	✓	✓
Recooling	✓	✓	✓	✓
Start logic for vacuum tube collectors	✓	✓	✓	✓
Control program for self-dumping systems (drain-back)	✓	✓	✓	✓
Function control and error memory with date and time	✓	✓	✓	✓
Menu blocker	✓	✓	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	×	✓	✓	✓
CAN bus connection for SOREL Connect	×	✓	✓	×
Data logging on microSD Card	×	via data logger	via data logger	✓
Ethernet connection	×	via data logger	via data logger	✓

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Highlights

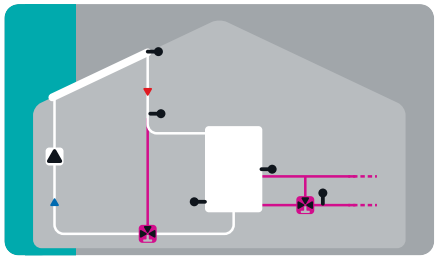
Additional functions to extend pre-defined systems in MTDC, LTDC & XTDC

In the new TDC generation, the predefi ned systems can be extended by free relays in an easy and fl exible way. Whenever the controller MTDC, LTDC & XTDC is equipped with more outputs than the chosen schematic requires, the remaining relays can be assigned to a broad selection of additional functions. The user is then guided through the corresponding settings step by step. Functions that complement one another, such as thermostat and antilegionella function, can be controlled by the same relay. Also the sensors can be used for multiple functions at the same time.

- Solar bypass
- Backup heating
- Cooling
- Return increase
- Heating circuit
- Temp. difference
- Pressure monitor
- Always on
- Anti legionella
- Parallel operation
- Storage transfer
- Solid fuel boiler
- Booster pump
- Error message

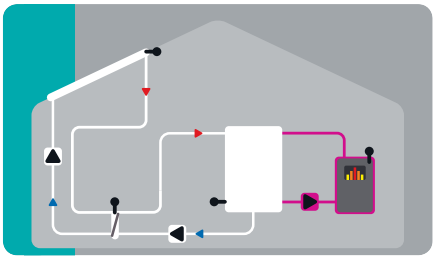
Examples:

System 1 + +



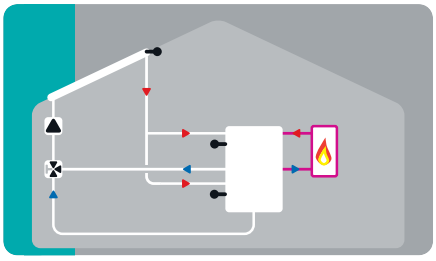
Solar with storage with additional functions Solar Bypass and Return Flow Increasee

System 2 +



Solar with heat exchanger with additional function Solid Fuel Boiler

System 10 +



Solar with 2 zone storage and switching valve with additional function Thermostat

SOREL Connect for Network Capabilities

SOREL Connect

Controllers with SOREL Connect capability are equipped with a CAN-Bus interface for system monitoring, data logging and full remote control. For more information on the new network concept, see page 44.

Speed-Control of Standard and High-Efficiency Pumps

ErP
HE pump ready
0-10V PWM

All models are available in distinct versions with different relay combinations. From small to Xtra large, all controllers can be used for speed-controlling high-efficiency pumps via 0-10V/PWM outputs.

Previous TDC versions with different hardware equipment, e.g. without speed-control or with speed-control of standard pumps, remain available on request.

STDC

Small Temperature Difference Controllers

Sincle circuit controller for basic systems with 1 storage

ErP
HE pump ready
0-10V PWM

Menu languages (additional languages on request)

STDC	
Sensor inputs	3
Relay outputs 230V	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1
Number of applications	9
Statistics and graphic analysis of data memory	✓
Flow based heat metering via Grundfos direct sensor (VFS)	×
Pressure monitoring via Grundfos direct sensor (RPS)	×
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled thermostat function	✓
Legionella protection via solar	✓
Legionella protection via thermostat	✓
Cooling function	✓
Setup wizard	✓
System protection	✓
Collector protection	✓
Storage protection (part of collector protection)	✓
Anti-freeze protection	✓
Recooling	✓
Start logic for vacuum tube collectors	✓
Control program for self-dumping systems (drain-back)	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Dimensions Height x Width x Depth	115mm x 86mm x 45mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

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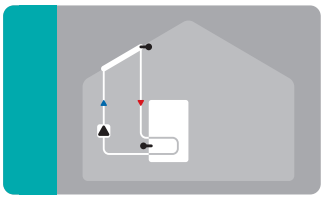
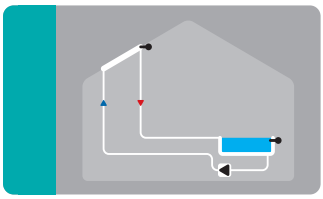
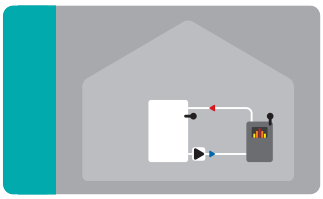
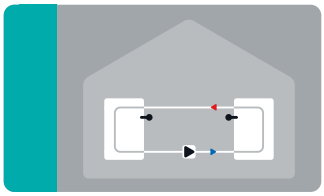
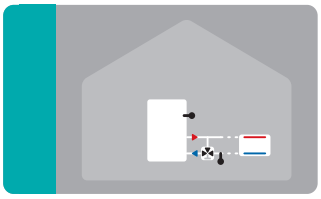
Hydraulic variants STDC

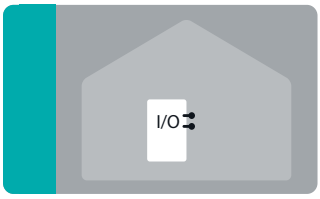

Solar with storage


Solar with swimming pool


Solid fuel boiler with storage

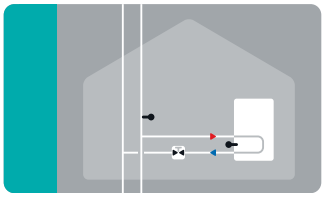

Storage transfer

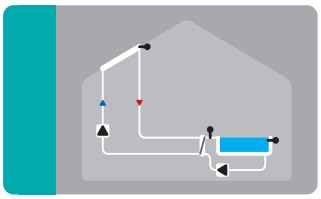

Return flow increase



Thermostat function

Universal DeltaT


Stop valve


Solar with heat exchanger (sensor in secondary circuit) and pool

Art. no. 10003 - STDC

Art. no. 10203 - STDC with 2 sensors TT/S2 PT1000

Art. no. 10303 - STDC with 3 sensors TT/S2 PT1000

The previous versions STDC-V1 to STDC-V4 with different hardware equipment, e.g. without speed-control or with speed-control of standard pumps, remain available.

MTDC

Medium Temperature Difference Controllers

Two circuit controller for systems with 1-2 storages.

Menu languages (additional languages on request)

MTDC	
Sensor inputs	4
Relay outputs 230V	2
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1
Number of applications	25+
Extension of pre-defined systems by selectable additional functions	✓
LEDs red/green for display of operating status	1
Statistics and graphic analysis of data memory	✓
Flow based heat metering via Grundfos direct sensor (VFS)	×
Pressure monitoring via Grundfos direct sensor (RPS)	×
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled thermostat function	✓
Legionella protection via solar	✓
Legionella protecion via additional heating	✓
Cooling function	✓
Setup wizard	✓
System protection	✓
Collector protection	✓
Storage protection (part of the collector protection)	✓
Anti-freeze protection	✓
Recooling	✓
Start logic for vacuum tube collectors	✓
Control program for self-dumping systems (drain-back)	✓
Function control and error memory with date and time	✓
Menu blocker	✓
CAN bus connection for SOREL Connect	✓
Data logging on microSD Card	✓
Ethernet connection	✓
Dimensions Height x Width x Depth	163mm x 110mm x51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

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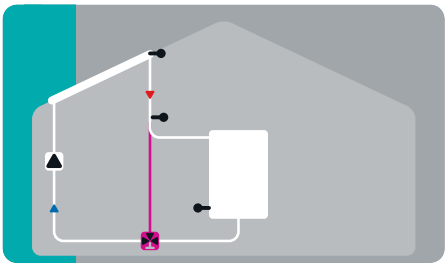
MTDC - Additional functions for free relays

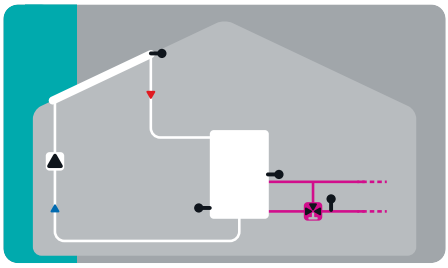
- Solar bypass
- Backup heating control
- Cooling function
- Collector field cooling
- Return flow increase
- Anti-legionella function
- Storage transfer
- Universal DeltaT
- Always on
- Thermostat 2
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Pressure monitoring
- Booster for fast system loading
- Heating Circuit
- Parallel operating with R1
- Parallel operating with R2

Example:
System 1 +



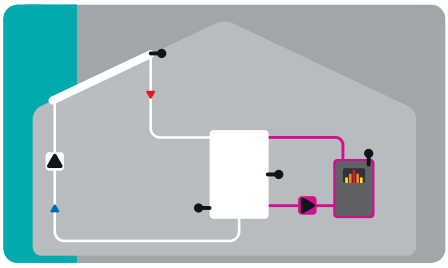
Solar with storage with additional function Solar Bypass

System 1 +



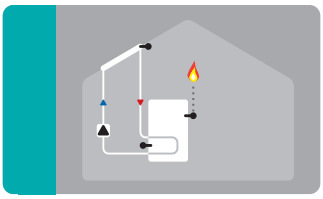
Solar with heat exchanger with additional function Return Flow Increasee

System 1 +

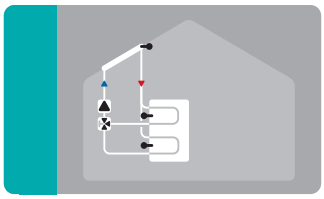


Solar with heat exchanger with additional function Solid Fuel Boiler

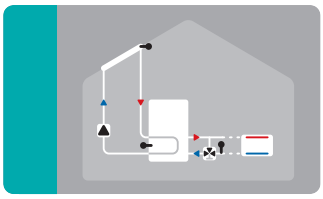
Hydraulic variants MTDC - Includes all STDC variants plus:



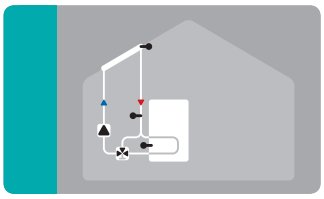
Solar with thermostat (auxiliary heating)



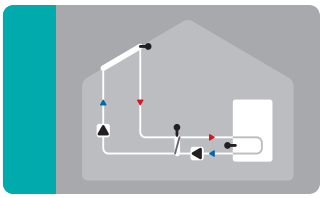
Solar with two-zone storage



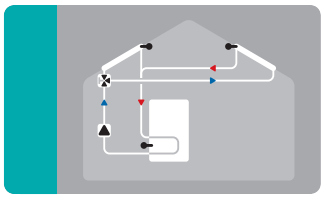
Solar with heating circuit



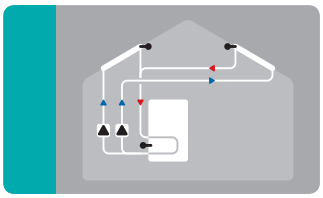
Solar with bypass



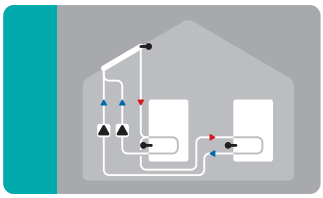
Solar with heat exchanger



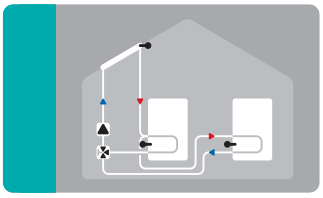
Solar with 2 collector surfaces



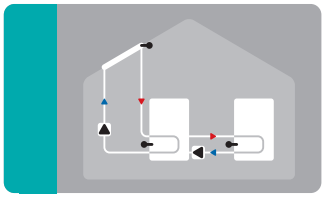
Solar with 2 collector surfaces and 2 pumps



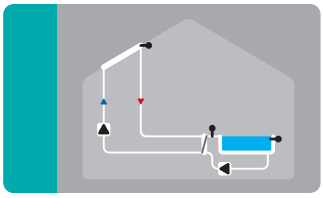
Solar with 2 storages and 2 pumps



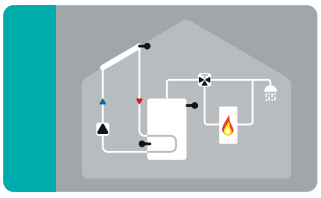
Solar with 2 storages and valve



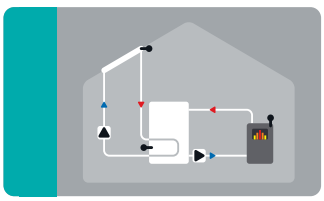
Solar with storage transfer



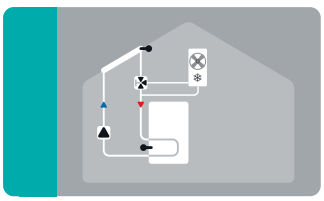
Solar with pool and heat exchanger



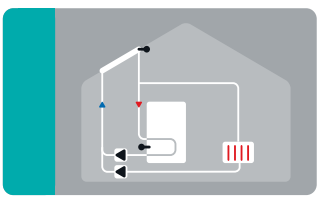
Solar with thermostat and valve



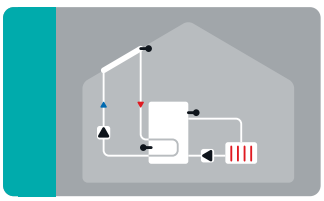
Solar with solid-fuel boiler



Solar with cooling 1 (collector cooling)



Solar with cooling 2 (collector cooling)



Solar with cooling 3 (storage cooling)

Art. no. 16005 - MTDC

Art. no. 16205 - MTDC mit 2 Fühlern TT/S2 PT1000

Art. no. 16305 - MTDC mit 3 Fühlern TT/S2 PT1000

The previous versions MTDC-V1 to MTDC-V4 with different hardware equipment, e.g. without speed-control or with speed-control of standard pumps, remain available.

LTDC

Large Temperature Difference Controllers

Three circuit controller for systems with 1-3 storages

SOREL Connect | ErP HE pump ready 0-10V PWM

Customer-specific pre-parametrisations to individual heating systems possible. More on p. 55

Menu languages (additional languages on request)

LTDC

Sensor inputs	6
Relay outputs 230V	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	2
Number of applications	42+
LEDs red/green for display of operating status	✓
Statistics and graphic analysis of data memory	✓
Simple heat metering	✓
Flow based heat metering via Grundfos direct sensor (VFS)	2
Pressure monitoring via Grundfos direct sensor (RPS)	2
Time and temperature-controlled thermostat function	✓
Battery-backed Real Time Clock	✓
Legionella protection via solar	✓
Legionella protecion via additional heating	✓
Cooling function	✓
Setup wizard	✓
System protection	✓
Collector protection	✓
Storage protection (part of the collector protection)	✓
Anti-freeze protectionprogramme	✓
Recooling	✓
Start logic for vacuum tube collectors	✓
Control program for self-dumping systems (drain-back)	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
CAN bus connection for SOREL Connect	✓
Data logging on microSD Card	✓
Ethernet connection	✓
Dimensions Height x Width x Depth	163mm x 110mm x51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

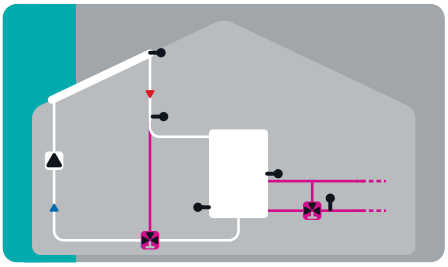
Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
SOREL GmbH Mikroelektronik, Jahnstraße 36, 45549 Sprockhövel, T: +49 2339 6024, F: +49 2339 6025,
www.sorel.de, info@sorel.de

LTDC - Additional functions for free relays

- Solar bypass
- Backup heating control
- Cooling function
- Collector field cooling
- Return flow increase
- Anti-legionella function
- Storage transfer
- Universal DeltaT
- Always on
- Thermostat 2
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Pressure monitoring
- Booster for fast system loading
- Heating Circuit
- Parallel operating with R1
- Parallel operating with R2

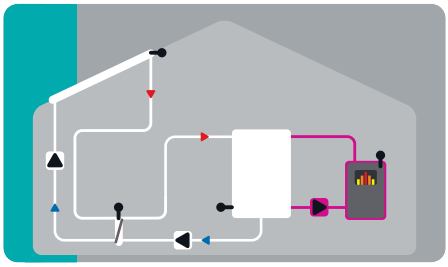
Example:

System 1 +



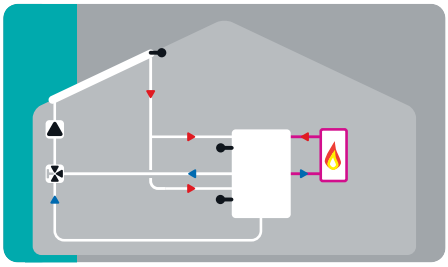
Solar with storage with additional functions Solar Bypass and Return Flow Increasee

System 2 +



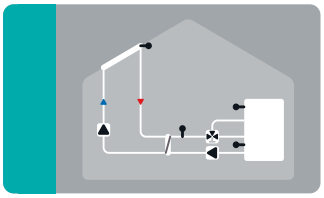
Solar with heat exchanger with additional function Solid Fuel Boiler

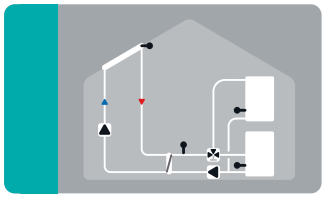
System 10 +

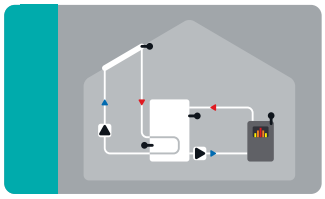


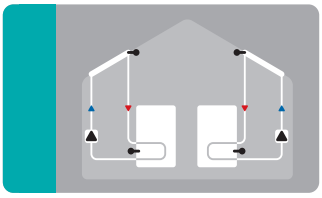
Solar with 2 zone storage and switching valve with additional function Thermostat

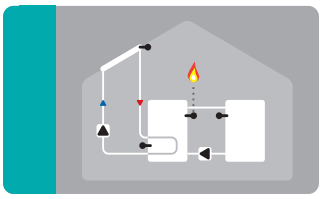
Hydraulic variants LTDC - Includes all STDC and MTDC variants plus:

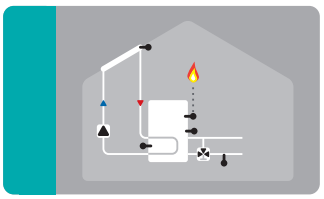

Solar with heat exchanger and valve

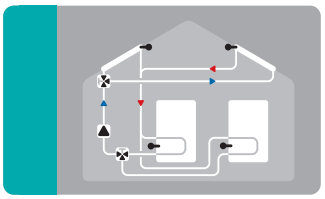

Solar with heat exchanger and 2 storages

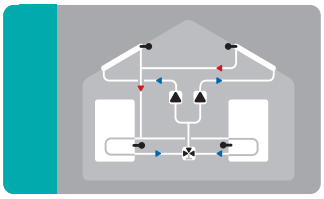

Solar with storage and solid-fuel boiler

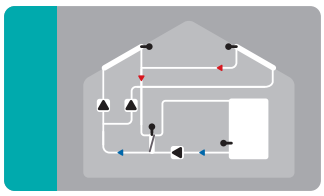

2x Solar

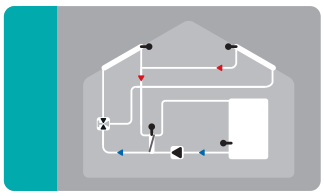

Solar with thermostat and storage transfer

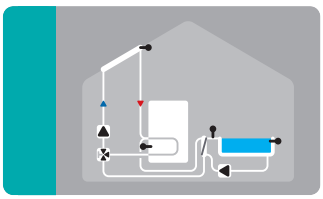

Solar with thermostat and return flow increase

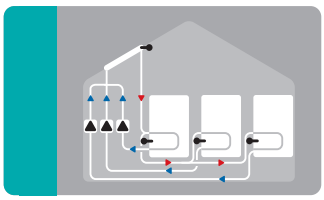

Solar with 2 collector surfaces, 2 storages and 2 valves

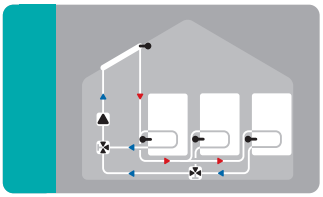

Solar with 2 collector surfaces, 2 storages and 2 pumps

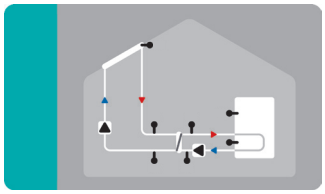

2xSolar with storage, heat exchanger and 2 pumps

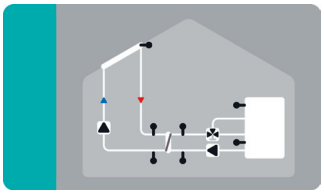

2xSolar with storage, heat exchanger and valve

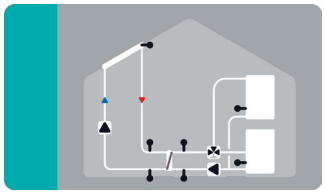

Solar with swimming pool, storage, heat exchanger and valve


Solar with 3 storages and 3 pumps


Solar with 3 storages and 2 valves


Solar with storage and heat exchanger für Großsysteme


Solar with storage, heat exchanger and valve for Large systems


Solar with 2 storages, heat exchanger and valve for Large systems

Art. no. 17003 - LTDC

Art. no. 17303 - LTDC with 3 sensors TT/S2 PT1000

Art. no. 17403 - LTDC with 4 sensors TT/S2 PT1000

Art. no. 17503 - LTDC with 5 sensors TT/S2 PT1000

The previous versions LTDC-V1 to LTDC-V4 with different hardware equipment, e.g. without speed-control or with speed-control of standard pumps, remain available.

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
SOREL GmbH Mikroelektronik, Jahnstraße 36, 45549 Sprockhövel, T: +49 2339 6024, F: +49 2339 6025,
www.sorel.de, info@sorel.de

XTDC

XtraLarge Temperature Difference Controllers

Multi-circuit controller for complex solar systems

SOREL Connect

ErP HE pump ready 0-10V PWM

Customer-specific pre-parametrisations to individual heating systems possible. More on p. 55

Menu languages (additional languages on request)

XTDC	Version 1	Version 2
Sensor inputs	8	8
Relay outputs 230V	6	6
Relay output voltage-free	1	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps (ErP)	2	2
Number of applications	48+	48+
Extension of pre-defined systems by selectable additional functions	✓	✓
LEDs red/green for display of operating status	✓	✓
Statistics and graphic analysis of data memory	✓	✓
Flow based heat metering via Grundfos direct sensor (VFS)	2	2
Pressure monitoring via Grundfos direct sensor (RPS)	2	2
Battery-backed Real Time Clock > 24h	✓	✓
Time and temperature-controlled thermostat function	✓	✓
Legionella protection via solar	✓	✓
Legionella protecion via additional heating	✓	✓
Cooling function	✓	✓
Setup wizard	✓	✓
System protection	✓	✓
Collector protection	✓	✓
Storage protection	✓	✓
Anti-freeze protection	✓	✓
Recooling	✓	✓
Start logic for vacuum tube collectors	✓	✓
Control program for self-dumping systems (drain-back)	✓	✓
Function control and error memory with date and time	✓	✓
Menu blocker	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓	✓
Data logging on microSD Card	✓	✓
Ethernet connection	via data logger	✓
Dimensions Height x Width x Depth	228mm x 180mm x 53mm	228mm x 180mm x 53mm
Housing Color	RAL 9003	RAL 9003
Protection Class	IP 40	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓	✓

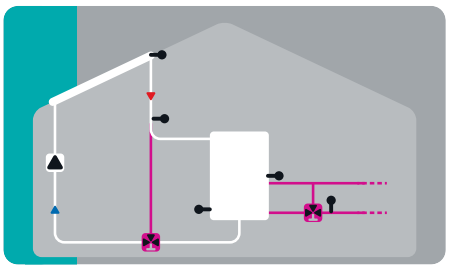
XTDC Hydraulic variants on page 18

XTDC - Zusatzfunktionen für frei belegbare Relais

- Solar bypass
- Backup heating control
- Cooling function
- Collector field cooling
- Return flow increase
- Anti-legionella function
- Storage transfer
- Universal DeltaT
- Always on
- Thermostat 2
- Solid fuel boiler control
- Signalling with activated protection function
- Signalling with new information message
- Pressure monitoring
- Booster for fast system loading
- Heating Circuit
- Parallel operating with R1
- Parallel operating with R2

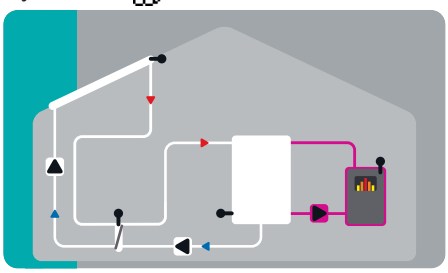
Example:

System 1 +



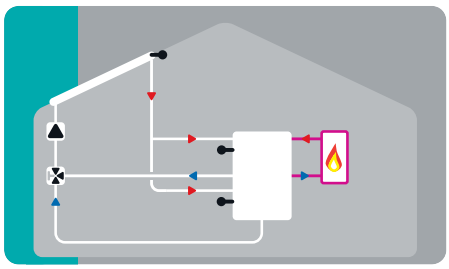
Solar with storage with additional functions Solar Bypass and Return Flow Increasee

System 2 +



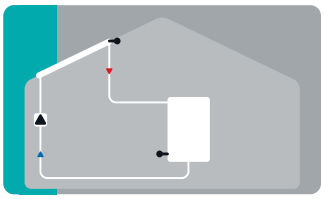
Solar with heat exchanger with additional function Solid Fuel Boiler

System 10 +

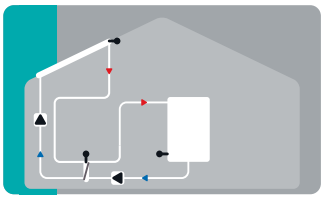


Solar with 2 zone storage and switching valve with additional function Thermostat

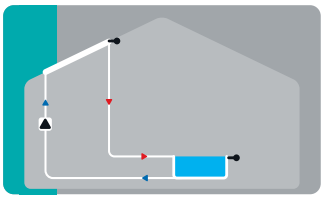
Hydraulic variants XTDC



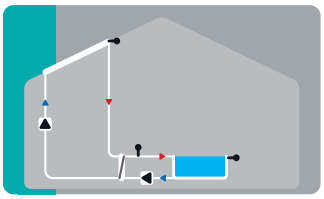
Solar with storage



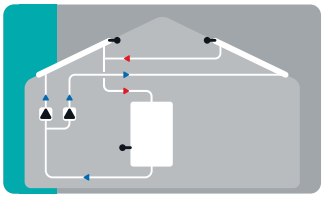
Solar with heat exchanger



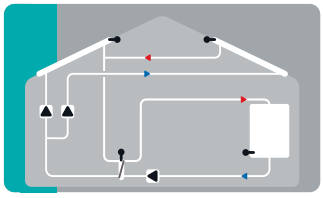
Solar with swimming pool



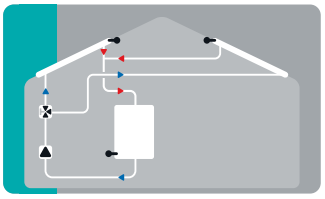
Solar with swimming pool and heat exchanger



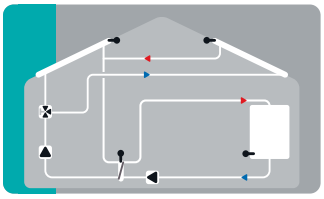
Solar with 2 collector surfaces and 2 pumps



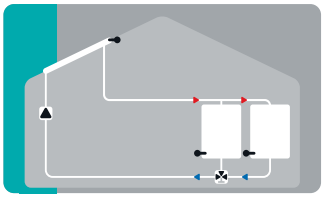
Solar with 2 collector surfaces with 2 pumps, 1 storage, heat exchanger and pump



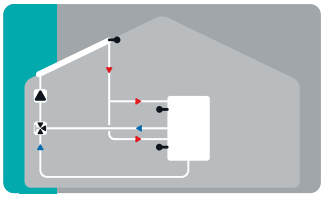
Solar with 2 collector surfaces and switching valve



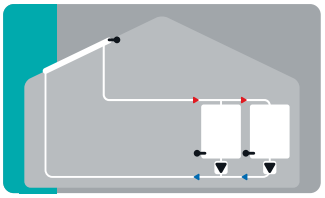
Solar with 2 collector surfaces, switching valve and heat exchanger



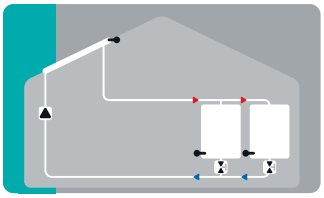
Solar with 2 storages and switching valve



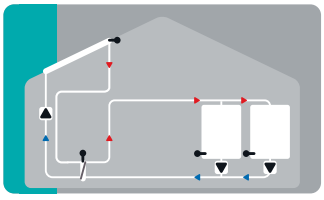
Solar with two-zone storage and switching valve



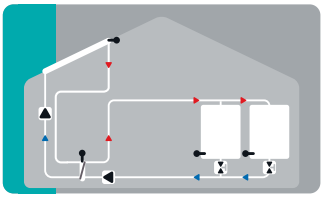
Solar with 2 storages and 2 pumps



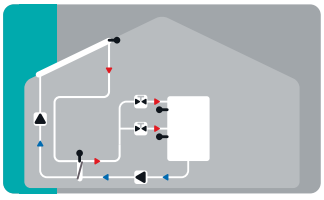
Solar with 2 storages and 2 stop valves



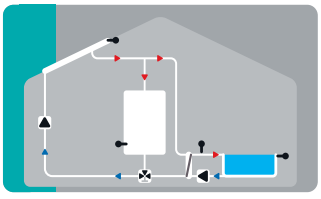
Solar with 2 storages, 2 pumps and heat exchanger



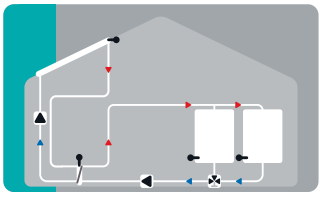
Solar with 2 storages, 2 stop valves and heat exchanger



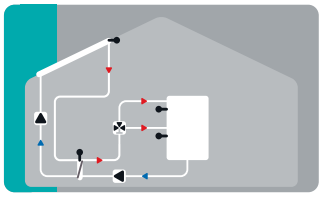
Solar with two-zone storage and stop valve



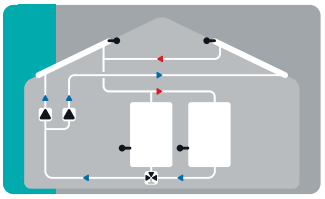
Solar with storage, swimming pool and heat exchanger



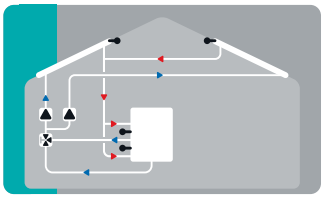
Solar with 2 storages, switching valve and heat exchanger



Solar with two-zone storage, switching valve and heat exchanger



Solar with 2 collector surfaces, 2 storages, 2 pumps and switching valve



Solar with 2 collector surfaces, two-zone storage, 2 pumps and switching valve

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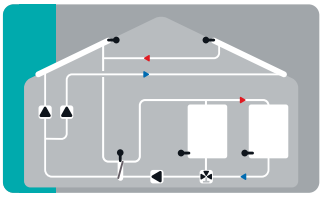
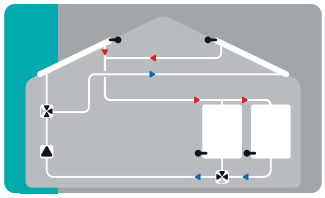
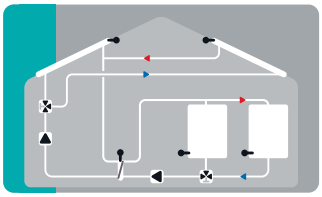
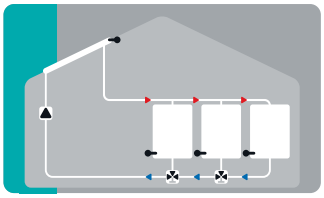
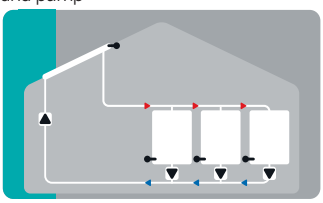
Hydraulic variants XTDC

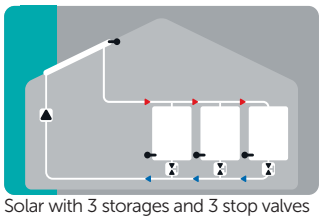

Solar with 2 collector surfaces with 2 pumps, 2 storages, heat exchanger and pump

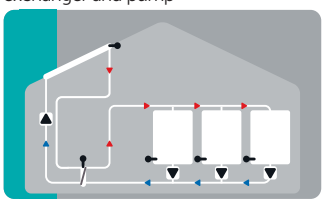

Solar with 2 collector surfaces, 2 storages and 2 switching valves

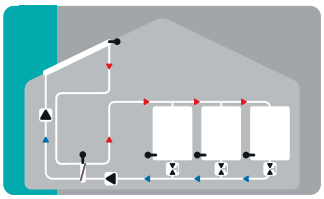

Solar with 2 collector surfaces with 1 valve, 1 pump, 2 storages, heat exchanger and pump

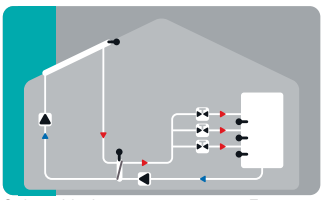

Solar with 3 storages and 2 switching valves

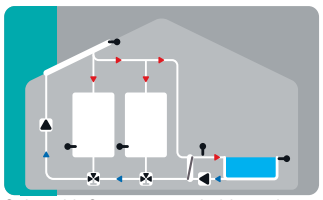

Solar with 3 storages and 3 pumps

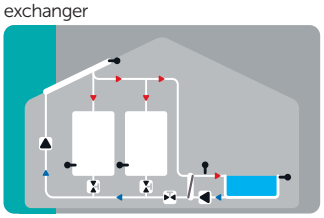

Solar with 3 storages and 3 stop valves

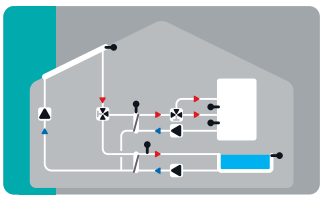

Solar with 3 storages, 3 pumps and heat exchanger

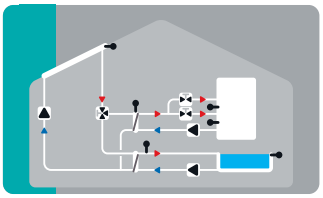

Solar with 3 storages, 3 stop valves and heat exchanger

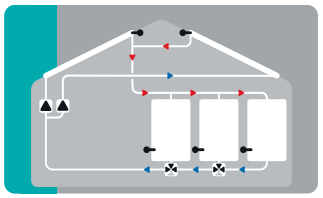

Solar with three-zone storage, 3 stop valves and heat exchanger

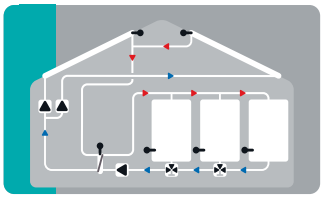

Solar with 2 storages, switching valves and swimming pool with heat exchanger

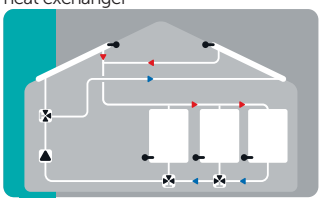

Solar with 2 storages, 3 stop valves and swimming pool with heat exchanger

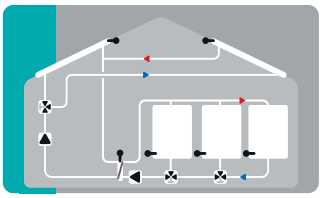

Solar with two-zone storage, switching valve, heat exchanger and pool with heat exchanger

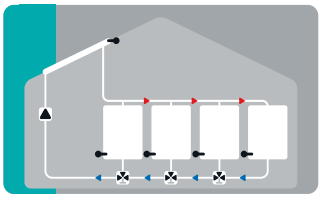

Solar with two-zone storage, 2 stop valves, heat exchanger and pool with heat exchanger

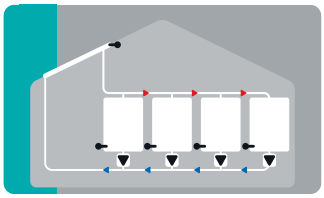

Solar with 2 collector surfaces and 3 storages with 2 switching valves

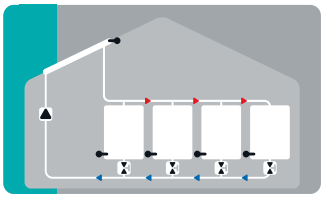

Solar with 2 collector surfaces, 3 storages with 2 switching valves and heat exchanger

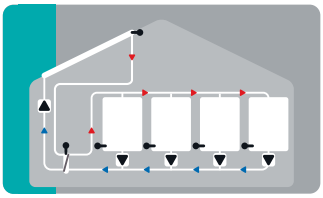

Solar with 2 collector surfaces with 1 valve, 1 pump, 3 storages with valves

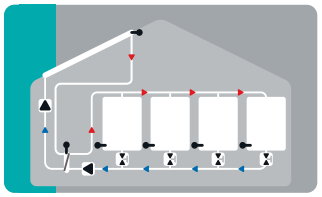

Solar with 2 collector surfaces with 2 pumps, 3 storages, heat exchanger and pump

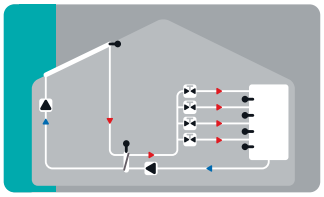

Solar with 4 storages and 3 valves

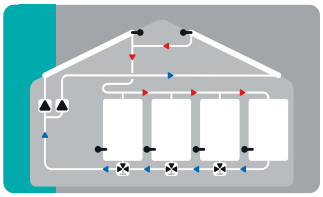

Solar with 4 storages and 4 pumps

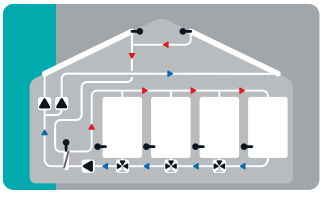

Solar with 4 storages and 4 stop valves

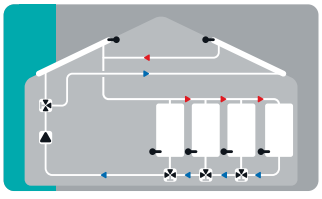

Solar with 4 storages, 4 pumps and heat exchanger

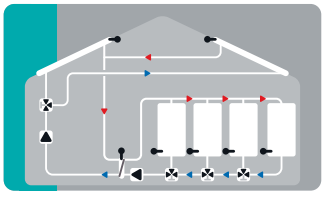

Solar with 4 storages, 4 stop valves and heat exchanger

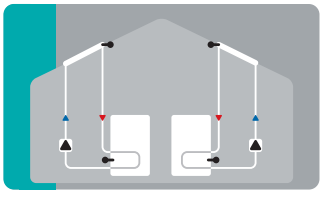

Solar with four-zone storage and 4 stop valves


Solar with 2 collector surfaces, 4 storages, 2 pumps and 3 switching valves


Solar with 2 collector surfaces, 4 storages, 2 pumps, 3 switching valves and heat exchanger


Solar with 2 collector surfaces, 4 storages and 3 switching valves


Solar with 2 collector surfaces, 4 storages and 3 switching valves and heat exchanger


2 x Solar

Art. no. 18001 - XTDC

Art. no. 18002 - XTDC with Ethernet incl. SOREL Connect

MTDC-E/LTDC-E

Medium Temperature Difference Controllers

For basic solar systems with electric backup heating up to 3kW.

Large Temperature Difference Controllers

For basic solar systems with electric backup heating up to 3kW and control of circulation pump.

Menu languages (additional languages on request)

	MTDC-E	LDTC-E
Sensor inputs	3	4
Relay outputs 230V	1	2
Relay output voltage-free (only 230VAC, max. 3kW)	1	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	0	1
Number of applications	5	8
Extension of pre-defined systems by selectable additional functions	✓	✓
LEDs red/green for display of operating status	1	1
Statistics and graphic analysis of data memory	✓	✓
Flow based heat metering via Grundfos direct sensor (VFS)	✓	✓
Battery-backed Real Time Clock > 24h	✓	✓
Time and temperature-controlled thermostat function	✓	✓
Legionella protection via solar	✓	✓
Legionella protecion via additional heating	✓	✓
Cooling function	✓	✓
Setup wizard	✓	✓
System protection	✓	✓
Collector protection	✓	✓
Storage protection	✓	✓
Anti-freeze protection	✓	✓
Recooling	✓	✓
Start logic for vacuum tube collectors	✓	✓
Control program for self-dumping systems (drain-back)	×	✓
Function control and error memory with date and time	✓	✓
Menu blocker	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm	163mm x 110mm x 51mm
Housing Color	RAL 9003	RAL 9003
Protection Class	IP 40	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓	✓

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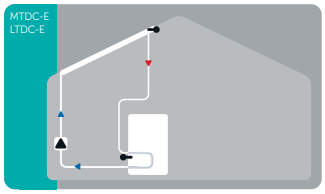
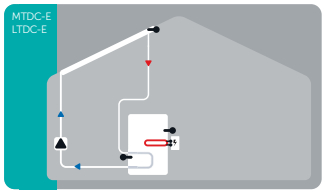
www.sorel.de, info@sorel.de

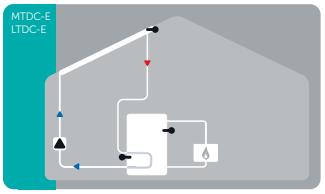
Hydraulic variants MTDC-E/LTDC-E



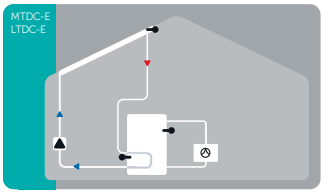
Solar with storage



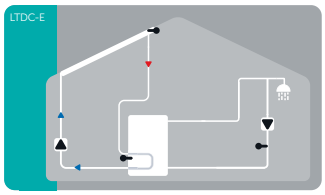
Solar with storage and immersion heater



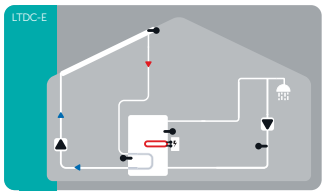
Solar with storage and gas boiler



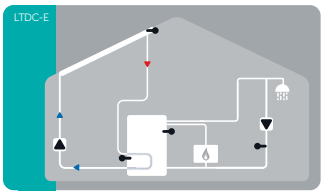
Solar with storage and heat pump



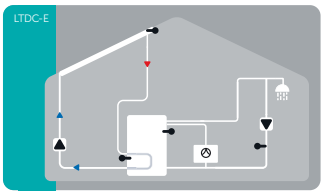
Solar with storage and circulation



Solar with storage, immersion heater and circulation



Solar with storage, gas boiler and circulation



Solar with storage, heat pump and circulation

Art. no. 16006 - MTDC-E	Art. no. 16007 - LTDC-E
Art. no. 16206 - MTDC-E with 2 sensors TT/S2 PT1000	Art. no. 16307 - LTDC-E with 3 sensors TT/S2 PT1000
Art. no. 16306 - MTDC-E with 3 sensors TT/S2 PT1000	Art. no. 16407 - LTDC-E with 4 sensors TT/S2 PT1000

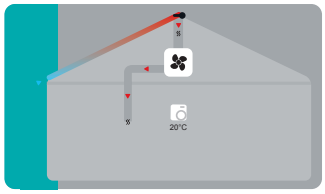
AIR TDC

Temperature Difference Controller for air collector systems

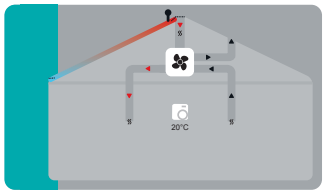
ErP
HE pump ready
0-10V PWM

Menu languages (additional languages on request)

AIR TDC	
Sensor inputs	3
Relay outputs 230V	2
Outputs 0..10V or PWM signal for speed control of an ECM fan	1
Number of applications	2
LEDs red/green for display of operating status	✓
Statistics and graphic analysis of data memory	✓
Batteriegepuff erte Echtzeituhr RTC > 24h	✓
Time and temperature-controlled thermostat function	✓
Ventilation flap function	✓
Night cooling	✓
Setup wizard	✓
Ventilator protection	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓



Standard air collector system



Air collector system with ventilation flap

Art. no. 16013 - AIR TDC

Art. no. 16213 - AIR TDC Set with 2 PT1000 sensors
Room sensor RC20 and collector sensor TTS2

Art. no. 16313 - AIR TDC Set with 3 PT1000 sensors
Room sensor RC20, collector sensor TTS2 and Outdoor sensor TA52

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
SOREL GmbH Mikroelektronik, Jahnstraße 36, 45549 Sprockhövel, T: +49 2339 6024, F: +49 2339 6025,
www.sorel.de, info@sorel.de

PUMP GROUPS

without TDC Controller

S1-Solar-1

Completely pre-assembled and tested pump groups 3/4" with solar pump and safety assembly

- High-efficiency solar pump WILO Yonos Para ST 25/7 PWM
- Ball valves with integrated stop valve and thermometer
- Flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Working temperature 120 °C (short-term 160 °C)

Art. no. 71111 - S1-Solar-1 3/4"AG

Art. no. 71111

S2-Solar-2

Completely pre-assembled and tested pump groups 3/4" with solar pump and safety assembly

- High-efficiency solar pump WILO Yonos Para ST 25/7 PWM or WILO Yonos Para ST 25/13 PWM
- ball valves with integrated stop valve and thermometer
- flow meter 2-12 l/min with stop valve and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Distance between supply and return 125 mm
- Working temperature 120 °C (short-term 160 °C

Art. no. 72211 - S2 Solar 2 3/4"AG

Art. no. 72211

Auxiliary equipment for all Solar groups

Wall fixture for expansion tanks for all solar groups

Art. no. 77301

Stainless steel flex pipe 0,5m for expansion tank, for all solar groups

Art. no. 77401

Pump groups of different manufacturers and previous versions with standard pumps are available on request.

PUMP GROUPS

with TDC Controller

S1-Solar-10

Completely pre-assembled and tested single strand pump group 3/4" with solar pump and safety assembly and solar controller STDC

- High-efficiency solar pump WILO Yonos Para ST 25/7 PWM
- Temperature Difference Controller STDC plugwired and tested, including 2 sensor probes
- Ball valve with integrated non-return valve and thermometer
- Flowmeter 2-12 l/min with shut-off and 2 fill and drain ball valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Working temperature 120 °C (short-term 160 °C)

Art. no. 61103 - S1-Solar-10 pump group + STDC
+ HE Pumpe WILO Yonos Para ST25/7 PWM

S2-Solar-30

Completely pre-assembled and tested solar station 3/4" with solar pump, safety assembly, breather tube and solar controller MTDC

- High-efficiency solar pump WILO Yonos Para ST 25/7 PWM or WILO Yonos Para ST 25/13 PWM
- Temperature Difference Controller MTDC plugwired and tested sensors included
- Ball valves with integrated stop valve and thermometer
- Flowmeter 2-12 l/min with stop valve and 2 fill and drain valves
- Safety assembly with manometer 0-10 bar and safety valve 6 bar
- Outlet 3/4" to expansion tank at the safety assembly
- Wall-fastening fixture
- Distance between supply and return 125 mm
- Working temperature 120 °C (short-term 160 °C)

Art. no. 63163 - S2-Solar-30 pump group + MTDC
+ HE Pump WILO Yonos Para ST 25/7 PWM

Art. no. 63263 - S2-Solar-30 pump group + MTDC
+ HE Pump WILO Yonos Para ST25/13 PWM

Art. no. 63173 - S2-Solar-30 pump group + LTDC
+ HE Pump WILO Yonos Para ST 25/7 PWM

Art. no. 63273 - S2-Solar-30 pump group + LTDC
+ HE Pump WILO Yonos Para ST25/13 PWM

Pump groups of different manufacturers and previous versions with standard pumps are available on request.

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www.sorel.de, info@sorel.de

DRAINSET

DrainSet MTDC and LTDC. Completely pre-assembled, pre-wired and pre-configured Drain-Back Station consisting of the following components:

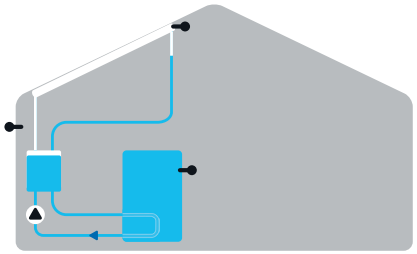
- Drain-Back Box with a volume up to 40l (depending on collector size 30-40m^2)
- TDC controller incl. 3 temperature sensors
- Safety valve 6 bar with pressure gauge
- Filling and flushing unit DN20 incl. connections and fill and drain valve
- Modular extension for big systems possible
- High-efficiency solar pump (Grundfos PM2, height up to 14.5m/WILO Yonos Para ST height up to 13m). The height indications refer to water as the heat transfer medium. If glycol is used to fill the drain-back system, the delivery head of the pump is reduced by about 2-3 meters.

Available from spring 2015

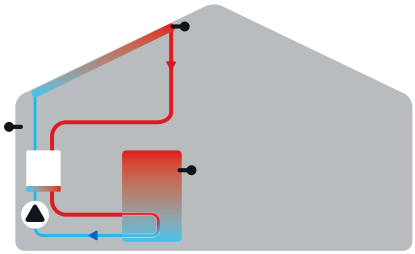
Art. no. 67165 - DrainSet MTDC

Art. no. 67173 - DrainSet LTDC

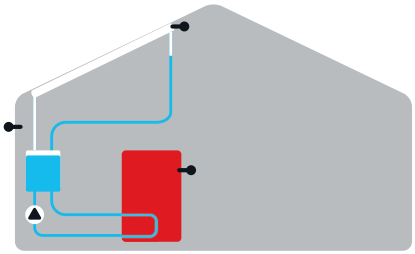
Operating Principle of Drain-Back Systems



Idle mode of solar system
In idle mode, the heat transfer medium is in the Drain-Back Box. The collectors are empty



Solar system in operation
Under solar exposure, the system is set into operation by the TDC controller and the whole solar circuit / collectors are filled will maximum pump speed. Once in regular operation, the pump operates with reduced and continuously optimised speed to save energy.



Storage fully loaded
When the storage is fully heated up or if the solar collectors are no longer warmer than the storage, the pump is automatically switched off. The heat transfer medium flows back from the collectors into the Drain-Box system without vaporising. Therefore, any overheating of stagnant solar systems is effectively prevented.

POOL TDC M/M+

Solar Pool Controller

Solar pool controller for efficient use and function control of a solar or heating system with your swimming pool.

Menu languages (additional languages on request)

Pool TDC	Pool TDC M	Pool TDC M+
Sensor inputs	3	3
Relay outputs 230V	2	2
Number of applications	3	4
LEDs red/green for display of operating status	✓	✓
Statistics and graphic analysis of data memory	✓	✓
Battery-backed Real Time Clock > 24h	✓	✓
Time and temperature-controlled thermostat function	✓	✓
Setup wizard	✓	✓
Heating request	✓	✓
Filter pump control	×	✓
Control of filter pump runtime (3 periods per day)	×	✓
Temperature-dependant optimisation of filter pump runtime	×	✓
Eco mode: consideration of solar operating times	×	✓
System protection	✓	✓
Anti-freeze protection	✓	✓
Function control and error memory with date and time	✓	✓
Menu blocker	✓	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm	163mm x 110mm x 51mm
Housing Color	RAL 9003	RAL 9003
Protection Class	IP 40	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓	✓

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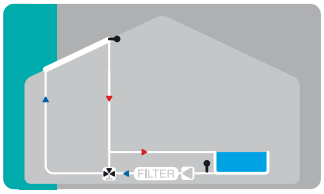
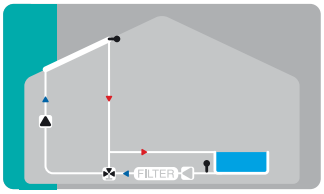
www.sorel.de, info@sorel.de

Hydraulic variants Pool TDC M



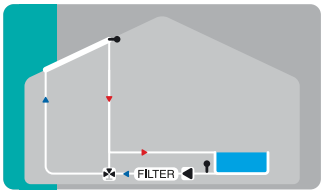
Pool with solar and ball valve



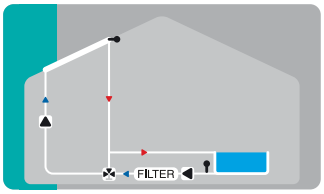
Pool with solar and additional pump

Pool with backup heating and ball valve

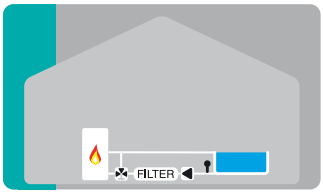
Hydraulic variants Pool TDC M+



Pool with solar, ball valve and filter pump control



Pool with solar, additional pump and filter pump control



Pool with backup heating, ball valve and filter pump control

Pool with filter pump control

Art. no. 56001- Pool TDC M

Art. no. 56011 - Pool TDC M+

Art. no. 56301 - Pool TDC M Set with 3 PT1000 temperature immersion sensors (sensor 2x5m and 1x10m outdoor cables)

Art. no. 56311 - Pool TDC M+ Set with 3 PT1000 temperature immersion sensors (sensor 2x5m and 1x10m outdoor cables)

Art. no. 56501 - Pool TDC M completely prewired with 3 temperature immersion sensors (sensor 2x5m and 1x10m outdoor cables), Belimo actuator SR230A5 acc. to ISO 5211- F 05, valve/ball valve DN40, power cord

Art. no. 56511 - Pool TDC M+ with with control / optimisation of filter pump runtime completely prewired with 3 temperature immersion sensors (sensor 2x5m and 1x10m outdoor cables), Belimo actuator SR230A5 acc. to ISO 5211- F 05, valve/ball valve DN40, power cord

Art. no. 56601 - Pool TDC M completely prewired with 3 temperature immersion sensors (sensor 2x5m and 1x10m outdoor cables, Belimo actuator SR230A5 acc. to ISO 5211- F 05, valve/ball valve DN50, power cord

Art. no. 56611 - Pool TDC M+ with control / optimisation of filter pump runtime completely prewired with 3 temperature immersion sensors (sensor 2x5m and 1x10m outdoor cables, Belimo actuator SR230A5 acc. to ISO 5211- F 05, valve/ball valve DN50, power cord

SBMC

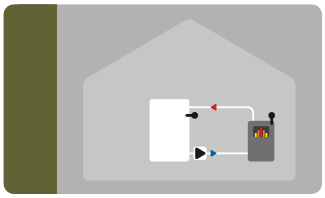
Biomass Controller

Controller for solid fuel boilers with pump-speed control for constant loading temperature.

Menu languages (additional languages on request)

SBMC	
Sensor inputs	3
Relay outputs 230V	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1
Battery-backed Real Time Clock > 24h	✓
Setup wizard	✓
Statistics and graphic analysis of data memory	✓
Anti-legionella function	✓
Seizing Protection	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Constant loading temperature by speed-controlling the high-efficiency pump	✓
Dimensions Height x Width x Depth	115mm x 86mm x 45mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Hydraulic variants SBMC



Art. no. 10008 - SBMC

Art. no. 10208 - Set with 2 sensors TT/S2 PT1000

Art. no. 10308 - SBMC Set with 3 sensors TT/S2 PT1000

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
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WPC5

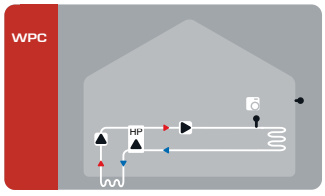
Heat Pump Controller

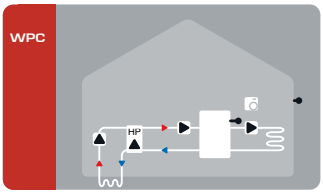
For various heat pump systems with glycol pump, compressor and heating circuit. Detection of external error conditions and Voltage interlock. Optionally with domestic hot water storage and buffer storage.

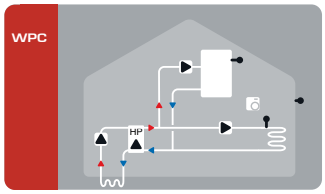
Menu languages (additional languages on request)

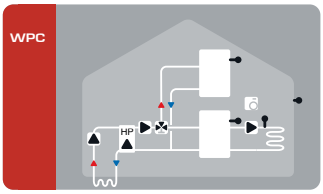
WPC5	
Sensor inputs	5
Relay outputs 230V	4
Relay output voltage-free (nur 230VAC)	1
LEDs red/green for display of operating status	✓
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled thermostat function	✓
Setup wizard	✓
Statistics and graphic analysis of data memory	✓
Seizing Protection	✓
Anti-freeze protection	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

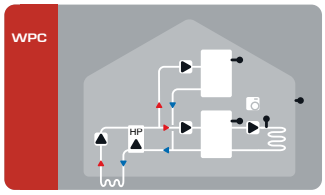
Hydraulic variants WPC5











Art. no. 35000 - WPC 5

Art. no. 35500 - WPC5 with 1 sensor TA52 PT1000 and 4 sensors TT/S2 PT1000

Heating Circuit Controllers HCC

Overview

SOREL Connect

ErP HE pump ready 0-10V PWM

Customer-specific pre-parametrisations to individual heating systems possible. More on p. 55

HCC	MHCC	HCC4	HCC5	HCC6	XHCC
Sensor inputs	4	6	6	6	16
of which for temperature sensors	3	5	5	4	10
of which for remote adjuster	1	1	1	1	2
of which for humidty	0	0	0	1	0
of which for Direct Sensors VFS / RPS temperature	0	0	0	0	2
of which for Direct Sensors VFS / RPS flow	0	0	0	0	2
Compatible room thermostat	RC20/RC21	RC20/RC21	RC20/RC21	RC22	RC20/RC21
Relay outputs 230V	3	4	4	4	6
Relay output voltage-free	0	1	1	2	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps (ErP)	1	0	0	0	2
Number of applications	2	6	3	3	13
Extension of pre-defined systems by selectable additional functions	×	×	×	×	✓
LEDs red/green for display of operating status	✓	✓	✓	✓	✓
Statistics and graphic analysis of data memory	✓	✓	✓	✓	✓
Programmable thermostat times and functions per day	3	2x3	1x3	2x3	2x3
Comfort function for quick heating	✓	✓	✓	✓	✓
Heating circuit with mixer	✓	✓	✓	✓	1-2
2nd heating circuit without mixer	×	✓	×	×	✓
2nd heating circuit with mixer	×	×	×	×	✓
Domestic hot water	×	×	✓	×	✓
Legionella function via solar	×	×	×	×	✓
Legionella protecion via additional heating	×	×	✓	×	✓
Cooling	×	×	×	✓	✓
Setup wizard	✓	✓	✓	✓	✓
Solar-System protection	×	×	×	×	✓
Solar-Collector protection	×	×	×	×	✓
Buffer discharge protection	✓	✓	✓	×	✓
Anti-freeze protection	✓	✓	✓	✓	✓
Seizing Protection	✓	✓	✓	✓	✓
Solar-Recooling	×	×	×	×	✓
Start logic for vacuum tube collectors	×	×	×	×	✓
Control program for self-dumping systems (drain-back)	×	×	×	×	✓
Function control and error memory with date and time	✓	✓	✓	✓	✓
Menu blocker	✓	✓	✓	✓	✓
Data logging on microSD Card	via data logger	×	×	×	✓
CAN bus connection for SOREL Connect	✓	×	×	×	Spring 2015
Ethernet connection	via data logger	×	×	×	✓
Dimensions Height x Width x Depth in mm	163 x 110 x 51	163 x 110 x 51	163 x 110 x 51	163 x 110 x 51	228 x 180 x 53
Housing Color	RAL 9003	RAL 9003	RAL 9003	RAL 9003	RAL 9003
Protection Class	IP 40	IP 40	IP 40	IP 40	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓	✓	✓	✓	✓

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
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www.sorel.de, info@sorel.de

MHCC

Medium Heating Controller

Weather-compensated heating controller for a mixed circuit with heat request.

Menu languages (additional languages on request)

MHCC	
Sensor inputs of which for temperature sensors of which for remote adjuster	4 3 1
Compatible room thermostat	RC20/RC21
Relay outputs 230V	3
Relay output voltage-free	via external relay (Art. no. 77502)
Outputs 0-10V or PWM for heat request	1
Programmable thermostat times and functions per day	3
Comfort function for quick heating	✓
Heating circuit with mixer	✓
Setup wizard	✓
Protection functions	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
Function control and error memory with date and time	✓
Data logging on microSD Card	via data logger
CAN bus connection for SOREL Connect	✓
Ethernet connection	via data logger
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 23001 - MHCC

Art. no. 23201 - MHCC Set with 1 sensor TR/S2 PT1000 and 1 sensor TA52 PT1000

Hydraulic variants on page 33

HCC4

Heating Circuit Controller

Weather-compensated heating controller with heat request for a mixed and an unmixed heating circuit.

Menu languages (additional languages on request)

HCC4	
Sensor inputs	6
of which for temperature sensors	5
of which for remote adjuster	1
Compatible room thermostat	RC20/RC21
Relay outputs 230V	4
Relay output voltage-free (nur 230VAC)	1
Statistics and graphic analysis of data memory	✓
Programmable thermostat times and functions per day	2x3
Comfort function for quick heating	✓
Heating circuit with mixer	✓
2nd heating circuit without mixer	✓
Setup wizard	✓
Protection functions	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
Function control and error memory with date and time	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 24000 - HCC4

Art. no. 24200 - HCC4 Set with 1 sensor TA52 PT1000, 1 sensor TR/S2 PT1000

Art. no. 24300 - HCC4 Set with 1 sensor TA52 PT1000, 1 sensor TT/S4 PT1000, 1 sensor TR/S2 PT1000

Art. no. 24400 - HCC4 Set with 1 sensor TA52 PT1000, 1 sensor TT/S4 PT1000, 2 sensors TR/S2 PT1000

Hydraulic variants on page 33

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HCC5

Heating Circuit Controller

Weather-compensated heating controller with heat request
for a mixed heating circuit with additional domestic hot water function.

Menu languages (additional languages on request)

HCC5	
Sensor inputs of which for temperature sensors of which for remote adjuster	6 5 1
Compatible room thermostat	RC20/RC21
Relay outputs 230V	4
Relay output voltage-free (nur 230VAC)	1
Statistics and graphic analysis of data memory	✓
Programmable thermostat times and functions per day	1x3
Comfort function for quick heating	✓
Heating circuit with mixer	✓
Domestic hot water	✓
Anti-legionella function	✓
Setup wizard	✓
Protection functions	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
Function control and error memory with date and time	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 25000 - HCC5

Art. no. 25400 - HCC5 Set with 1 sensor TA52 PT1000, 2 sensors TT/S4 PT1000, 1 sensor TR/S2 PT1000

Hydraulic variants on page 33

HCC6

Heating Circuit Controller

Weather-compensated controller for heating and cooling of a mixed circuit.

For correct operation of the HCC6, the Room thermostat RC22 (Art. no. 89022, see „Room thermostat RC22" on page 33) is required.

Menu languages (additional languages on request)

HCC6	
Sensor inputs	6
of which for temperature sensors	5
of which for remote adjuster	1
of which for humidty	1
Compatible room thermostat	RC22
Relay outputs 230V	4
Relay output voltage-free	2 (1x 230VAC, 1x low voltage)
Statistics and graphic analysis of data memory	✓
Programmable thermostat times and functions per day	1x3
Comfort function for quick heating	✓
Heating circuit with mixer	✓
Cooling + dehumidification	✓
Setup wizard	✓
Protection functions	✓
Menu blocker	✓
Function control and error memory with date and time	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 26000 - HCC6

Art. no. 26400 - HCC6 Set with 1 sensor TA52 PT1000, 1 sensor TT/S4 PT1000, 1 sensor TR/S2 PT1000 and RC22 Room controller

Hydraulic variants on page 33

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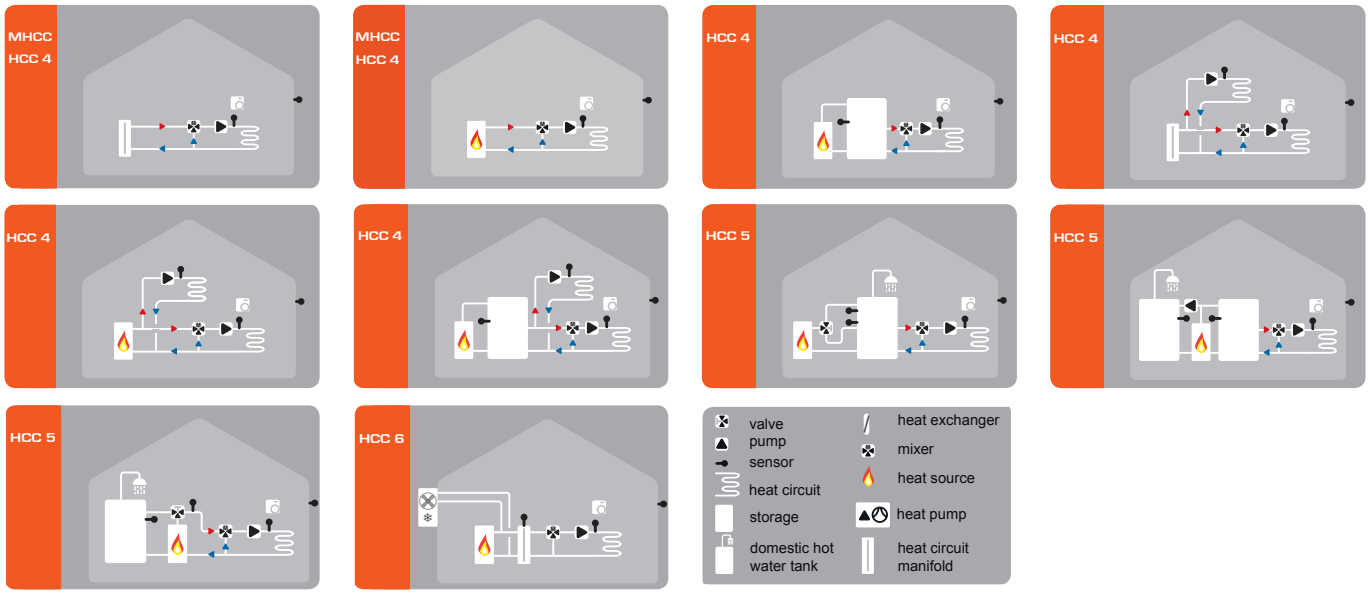
Hydraulic variants HCC, HCC4, HCC5 und HCC6



Heating circuit pump group

Clima MHCC

Completely preassembled and tested 2-Way pump group with 3-way-mixer, Servomotor and weather compensated Heating Controller MHCC incl. sensors

- Size: 466 x 250 x 215 mm
- PN10, Max.Temp.110°C, KVS 6,0
- Flow right, return left
- 2 ball valves with integrated thermometer
- external connector 1" Female
- Speed controlled High efficiency pump Wilo Stratos Pico 25/1-6
- 3-way-mixing valve with KVS 10,0
- Servomotor with 90° operating range
- Heat Circuit Controller MHCC completely prewired with connection box
- Outdoor sensor TA52
- Flow sensor TR/S1,5

Art. no. 60550 - Clima MHCC

Room thermostat

RC20

Optional for MHCC, HCC4, HCC5 and XHCC Room thermostat sensor.

Art. no. 89020 - RC20 Room temperature sensor and remote adjuster

RC21

Optional for MHCC, HCC4, HCC5 and XHCC Room thermostat with mode switch, heating curve parallel translation via dial and integrated room temperature sensor.

Art. no. 89021 - RC21 Room temperature sensor and remote adjuster

RC22

Required for HCC6 Room thermostat with mode switch, heating curve parallel translation via dial and integrated room temperature sensor and humidity sensor.

Art. no. 89022 - RC22 Room temperature sensor and remote adjuster

XHCC

XtraLarge Heating Circuit Controller

XtraLarge System Controller for fl exible regulation of complex heating systems with various heat sources.

SOREL Connect | ErP HE pump ready 0-10V PWM

Customer-specific pre-parametrisations to individual heating systems possible. More on p. 55

Menu languages (additional languages on request)

XHCC	Version 1	Version2
Sensor inputs	14	14
of which for temperature sensors	9	9
of which for remote adjuster	1	1
of which for Direct Sensors VFS / RPS temperature	2	2
of which for Direct Sensors VFS / RPS flow	2	2
Compatible room thermostat	RC20/RC21	RC20/RC21
Relay outputs 230V	6	6
Relay output voltage-free	1	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	2	2
Number of applications	13	13
Extension of pre-defined systems by selectable additional functions	✓	✓
LEDs red/green for display of operating status	✓	✓
Statistics and graphic analysis of data memory	✓	✓
Programmable heating circuit operating times and domestic hot water times per day	2x3	2x3
Comfort function for quick heating	✓	✓
Heating circuit with mixer/without mixer	1-2	1-2
Legionella function via solar/via backup heating	✓	✓
Cooling	✓	✓
Setup wizard	✓	✓
System protection	✓	✓
Collector protection	✓	✓
Buffer discharge protection	✓	✓
Recooling	✓	✓
Start logic for vacuum tube collectors	✓	✓
Control program for self-dumping systems (drain-back)	✓	✓
Function control and error memory with date and time	✓	✓
Menu blocker	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓	✓
Data logging on microSD Card	✓	✓
CAN bus connection for SOREL Connect	Spring 2015	Spring 2015
Ethernet connection	×	✓

Art. no. 28001 - XHCC with CAN

Art. no. 28002 - XHCC with Ethernet incl. SOREL Connect

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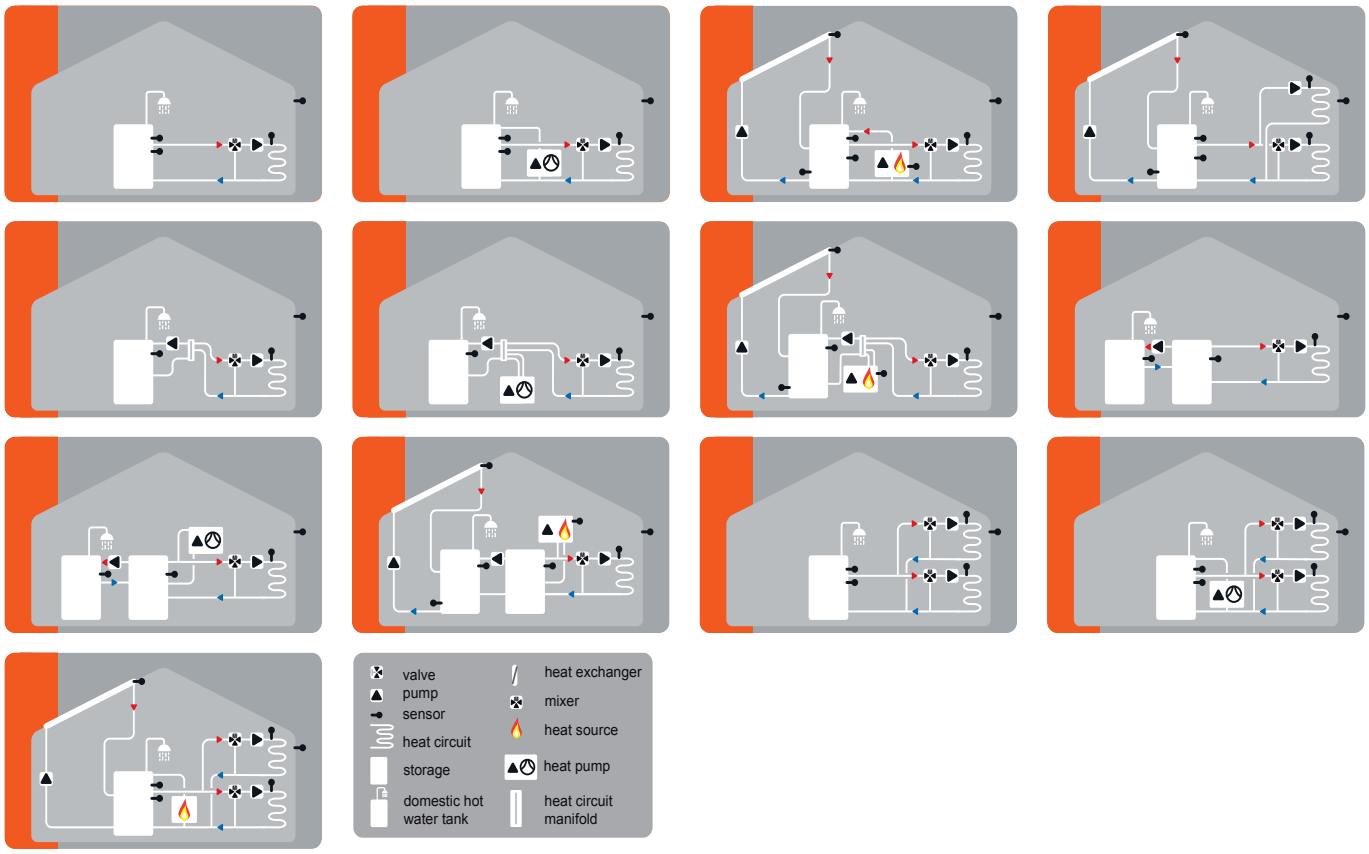
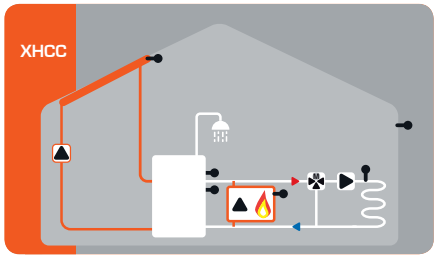
Hydraulic variants XHCC



XHCC Additional functions for extending of predefined schemes

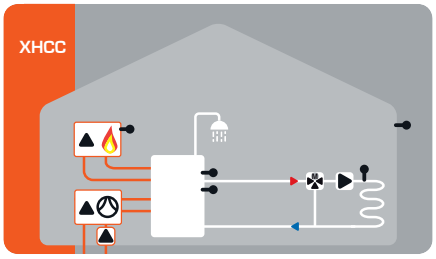
Example:

System 1 + +



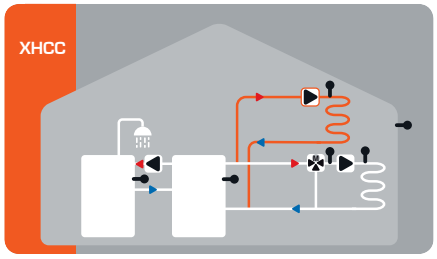
Combined storage tank with mixed heating circuit with additional function solar and additional heating

System 2 +



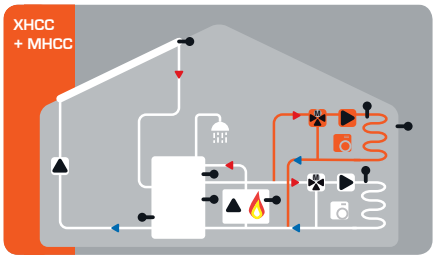
Combined storage tank with mixed heating circuit with additional function, additional heating and heat pump / compressor with brine pump

System 8 +

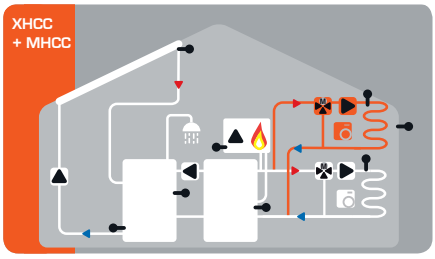


Combined storage tank with buffer storage tank with mixed heat circuit with additional function 2nd heating circuit

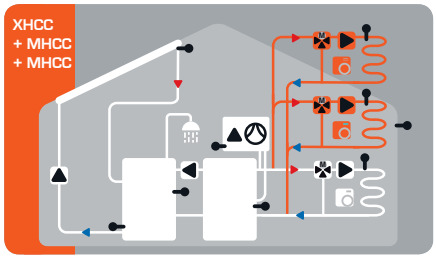
MHCC as an Extension Module for 1 Mixed Heating Circuit each (Spring 2015)



XHCC standard system: Combined storage with solar, gas boiler and heating circuit. An MHCC adds another heating circuit



XHCC standard system: Buffer and hot water storage with solar, gas boiler and heating circuit. An MHCC adds another heating circuit



XHCC standard system: Buffer and hot water storage with solar, heat pump and heating circuit. Two MHCCs add two heating circuits

Fresh Water Controllers FWC

Overview

Please note: Controllers are available only for Producers of Fresh Water Systems

FWC	SFWC	MFWC	LFWC
Sensor inputs	2	6	6
Sensor inputs for Grundfos VFS/RPS sensor	1	2	2
Relay outputs 230V	1	3	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1	2	2
Number of applications	2	9	12
Extension of pre-defined systems by selectable additional functions	✓	✓	✓
LEDs red/green for display of operating status	×	✓	✓
Statistics and graphic analysis of data memory	✓	✓	✓
Flow based heat metering via Grundfos direct sensor (VFS)	✓	✓	✓
Pressure monitoring via Grundfos direct sensor (RPS)	×	✓	✓
Battery-backed Real Time Clock > 24h	✓	✓	✓
Time and temperature-controlled thermostat function	×	✓	✓
Time and temperature-controlled circulation pump switch	✓	✓	✓
Switch for zone valve for optimized storage layering	×	✓	✓
Pre-regulation of the primary circuit temperature by three-way mixer	×	×	✓
Anti-legionella function	✓	✓	✓
Legionella protecion via additional heating	×	✓	✓
Setup wizard	✓	✓	✓
Solar-System protection	×	×	✓
Discharge protection	✓	✓	✓
Start logic for vacuum tube collectors	×	×	✓
Control program for self-dumping systems (drain-back)	×	×	✓
Function control and error memory with date and time	✓	✓	✓
Menu blocker	✓	✓	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓	✓	✓
CAN bus connection for SOREL Connect	×	✓	✓
Data-Logging auf microSD Karte	×	via data logger	via data logger
Ethernet connection	×	via data logger	via data logger
Cascade function	×	✓	✓
Dimensions Height x Width x Depth in mm	115 x 86 x 45	163 x 110 x 51	163 x 110 x 51
Housing Color	RAL 9003	RAL 9003	RAL 9003
Protection Class	IP 40	IP 40	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓	✓	✓

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SFWC

Small Fresh Water Controller

For small fresh water stations with speed-controlled high-efficiency pump.

Menu languages (additional languages on request)

SFWC	
Sensor inputs	2
Sensor inputs for Grundfos VFS/RPS sensor	1
Relay outputs 230V	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1
Number of applications	2
Extension of pre-defined systems by selectable additional functions	✓
Statistics and graphic analysis of data memory	✓
Flow based heat metering via Grundfos direct sensor (VFS)	✓
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled circulation pump switch	✓
Battery-backed Real Time Clock	✓
Anti-legionella function	✓
Setup wizard	✓
Discharge protection	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
Dimensions Height x Width x Depth	115mm x 86mm x 45mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 47001 - SFWC

Hydraulic variants on page 40

MFWC

Medium Fresh Water Controller

Universal controller for fresh water stations with speed-controlled primary pump and selectable additional functions like control of circulation pump.

Menu languages (additional languages on request)

MFWC	
Sensor inputs	6
Sensor inputs for Grundfos VFS/RPS sensor	1-2
Relay outputs 230V	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1
Number of applications	9
Extension of pre-defined systems by selectable additional functions	✓
LEDs red/green for display of operating status	✓
Statistics and graphic analysis of data memory	4
Flow based heat metering via Grundfos direct sensor (VFS)	✓
Pressure monitoring via Grundfos direct sensor (RPS)	✓
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled thermostat function	✓
Time and temperature-controlled circulation pump switch	✓
Switch for zone valve for optimized storage layering	✓
Anti-legionella function	✓
Setup wizard	✓
System protection	✓
Discharge protection	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
CAN bus connection for SOREL Connect	✓
Data-Logging auf microSD Karte	via data logger
Ethernet connection	via data logger
Cascade function	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 47003 - MFWC

MFWC Hydraulic variants on page 40

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LFWC

Large Fresh Water Controller

For large fresh water stations with speed-controlled high-efficiency pump and selectable additional functions like pre-control of primary temperature, storage zone valve and additional control of circulation pump.

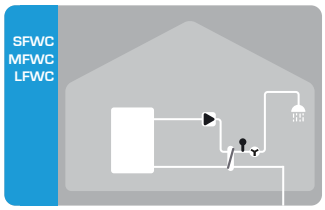
Menu languages (additional languages on request)

LFWC	
Sensor inputs	6
Sensor inputs for Grundfos VFS/RPS sensor	2
Relay outputs 230V	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	2
Number of applications	12
Extension of pre-defined systems by selectable additional functions	✓
LEDs red/green for display of operating status	✓
Statistics and graphic analysis of data memory	✓
Flow based heat metering via Grundfos direct sensor (VFS)	✓
Pressure monitoring via Grundfos direct sensor (RPS)	✓
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled thermostat function	✓
Time and temperature-controlled circulation pump switch	✓
Switch for zone valve for optimized storage layering	✓
Pre-regulation of the primary circuit temperature by three-way mixer	✓
Anti-legionella function	✓
Setup wizard	✓
Discharge protection	✓
Start logic for vacuum tube collectors	✓
Control program for self-dumping systems (drain-back)	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
CAN bus connection for SOREL Connect	✓
Data-Logging auf microSD Karte	via data logger
Ethernet connection	via data logger
Cascade function	✓
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

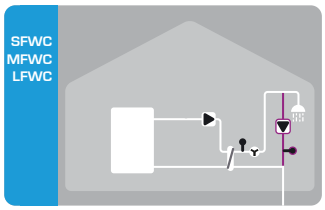
Art. no. 47005 - LFWC

LFWC Hydraulic variants on page 40

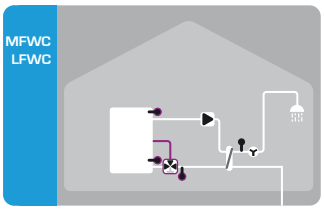
Hydraulic variants FWC with Additional functions



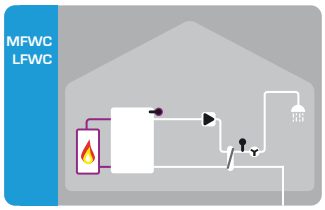
Basic scheme



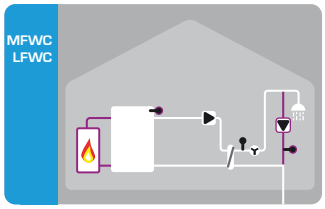
Additional function circulation



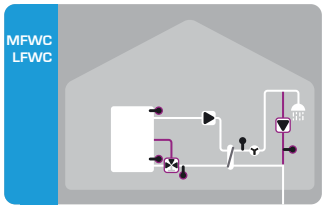
Additional function storage stratification



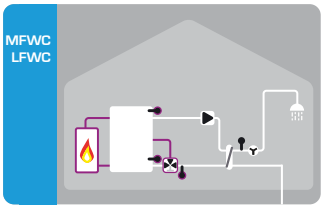
Additional function storage heating



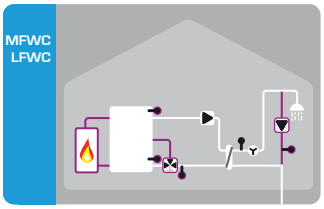
Additional functions storage heating and circulation



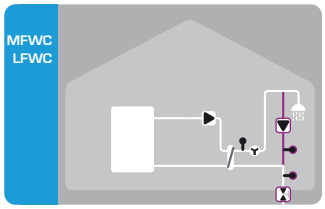
Additional functions storage stratification and circulation



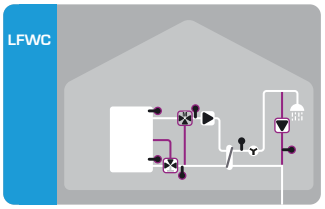
Additional functions storage stratification and storage heating



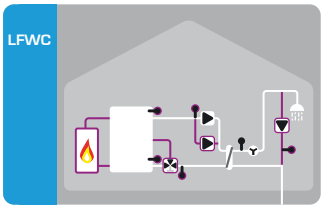
Additional functions circulation, storage stratification and storage heating



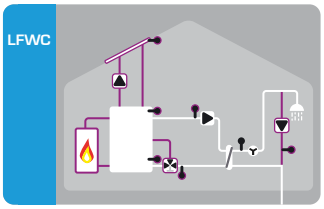
Additional functions cascade and circulation



Additional functions primary pre-mixer, circulation and storage stratification

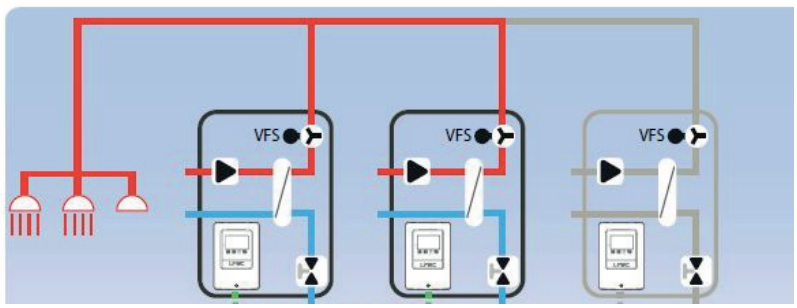


Additional functions circulation, storage stratification, storage heating and additional pump



Additional functions circulation, storage stratification, storage heating and solar

CASCADE FUNCTION MFWC/LFWC



The Cascade function uses the digital bus on the MFWC or LFWC to switch on additional fresh water stations in case of high tapping activity. No additional master or cascade controller is necessary.

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www.sorel.de, info@sorel.de

SLC

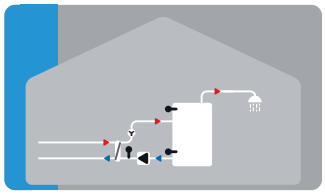
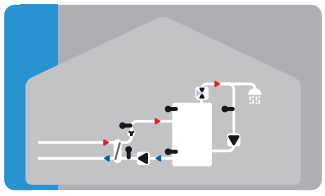
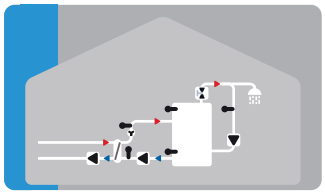
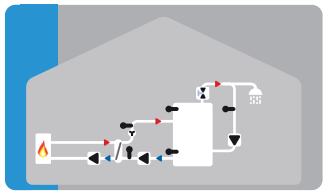
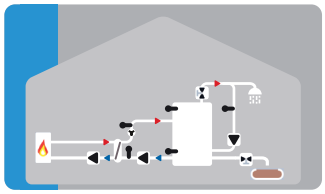
Storage Loading Controller

For charging big domestic hot water storages with high temperature precision.

Menu languages (additional languages on request)

SLC	
Sensor inputs	6
Sensor inputs for Grundfos direct VFS sensor	2
Relay outputs 230V	3
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	2
Adjustable additional functions for free defi nable Outputs	8
LEDs red/green for display of operating status	✓
Statistics and graphic analysis of data memory	✓
Heat metering	✓
Time and temperature-controlled circulation pump switch	✓
Sediment slushing	✓
Battery-backed Real Time Clock	✓
Anti-legionella function	✓
Setup wizard	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
Data-Logging auf microSD Karte und SOREL Connect	(planned)
Dimensions Height x Width x Depth	163mm x 110mm x 51mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Hydraulic variants SLC

Art. no. 47006 - SLC

CC

Circulation Controller

For optimised control of a circulation pump in domestic hot water systems. The speed-control of the circulation pump ensures a constant tapping temperature, decreases the energy consumption of the circulation pump and reduces turbulences in the storage.

ErP HE pump ready 0-10V PWM

Menu languages (additional languages on request)

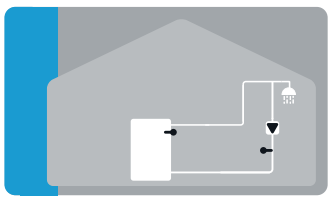
CC	
Sensor inputs	3
Relay outputs 230V	1
Outputs 0..10V or PWM signal for speed control of high-efficiency pumps	1
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled circulation pump switch	✓
Anti-legionella function	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Dimensions Height x Width x Depth	115mm x 86mm x 45mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Pump E3 Vario PWM

Speed-controllable high-efficiency circulation pump

- control range 4-28W, 1000-4800 rpm
- integrated non-return valve
- permitted temperature range 10°C - 95°C
- maximum delivery head 3,28m

Hydraulic variants



Art. no. 10007 - CC

Art. no. 10107 - CC Set with 1 pipe-mounted sensor TR/S2

Art. no. 73113 - CC domestic water circulation pump Set with 1 pipe-mounted sensor TR/S2 and circulation pump E3 Vario PWM

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
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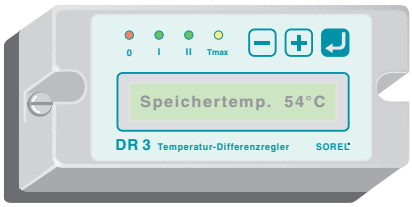
www.sorel.de, info@sorel.de

SUBSTITUTES FOR CONTROLLERS OF PREVIOUS SERIES



This table indicates which new controller succeeds those of previous series. These recommendations are non-binding and do not replace your own examination if the controller meets your requirements.

PREVIOUS MODEL	RECOMMENDED CONTROLLER
TDC 1	MTDC
TDC 2	MTDC
TDC 3	MTDC
TDC 4 ohne VFS	MTDC/LTDC
TDC 4 mit VFS	LTDC
TDC 5	LTDC
SD 01	STDC
SD 01/f	SBMC
DR 01	STDC
DR 01F	SBMC
DR 1	STDC
DR 1S	STDC
DR 1F	SBMC
DR 2	MTDC
DR 3	MTDC
DR 4	MTDC/LTDC
DR 5	LTDC
HR3/HCC3	MHCC
MR...	XHCC
SR...	XHCC

SOREL Connect

Monitoring, Analysis, Remote Control

Controllers marked with the SOREL Connect-logo on the left enable convenient system monitoring, data logging and remote control.

SOREL Connect is the new Plug & Play concept which does not require any particular network skills. Using a CAN-bus interface, the controllers can communicate with each other, or be connected with local networks or the internet via Ethernet. The user can monitor and remote control his heating system by PC, tablet and smartphone -anywhere, anytime.

Key features: visualisation of the heating system with status messages, temperatures and heat yield statistics. Infl uence the room temperature, activation of comfort boost and holiday mode. Experts can get a comprehensive PC software for setting all controller parameters in real time. Data logging is realised by a microSD card, so that all system data can be recorded and analysed extensively.

Network Principle

Application example: XHCC with direct Ethernet connection

Application example: MHCC with Ethernet connection via data logger

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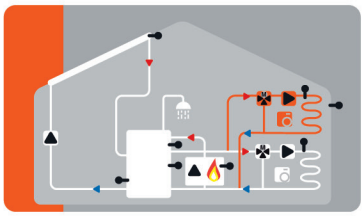
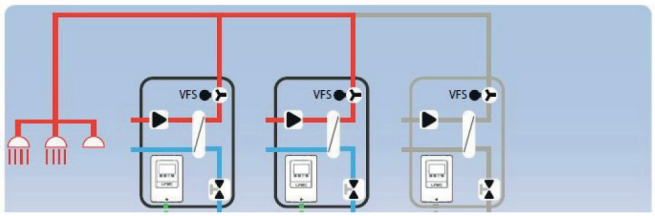
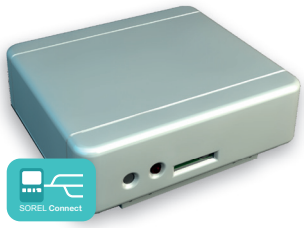
Network Principle



Application example: additional mixed heating circuit



Application example: fresh water cascade

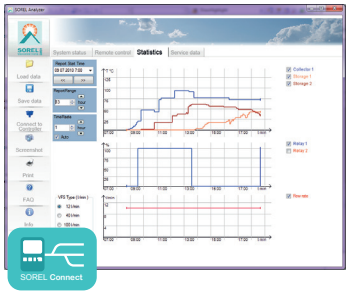


Data logger

For use with MTDC, LTDC, MHCC, MFWC, LFWC. The set consists of data logger, Micro SD-card, Ethernet interface, wall power supply, CAN connection cable to the controller, licence for SOREL Connect.

Art. no. 77701 - Data logger Set

CAN Connection Set	
Art.-No. 89201	CAN connection set 1m 1x 2-pole connection cable 1m with plugs 2x terminator with plug
Art.-No. 89203	CAN connection set 2,9m 1x 2-pole connection cable 1m with plugs 2x terminator with plug



PC-Software for experts

For full remote parametrisation and system analysis for the expert. Requires an XTDC V2 or XHCC V2 and some network know-how for setting up the internet access.

Art. no. 77800 - PC-Software for experts

TC

Thermostat Controller

Controller with thermostat function for storage loading.

Menu languages (additional languages on request)

TC	
Sensor inputs	3
Relay outputs 230V	1
Battery-backed Real Time Clock > 24h	✓
Time and temperature-controlled storage heating	✓
Anti-legionella function	✓
Programmable operating times per day	3
Function control and error memory with date and time	✓
Menu blocker	✓
Dimensions Height x Width x Depth	115mm x 86mm x 45mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 10006 - TC	Art. no. 10106 - TC Set with 1 sensor TT/S2 PT1000
Art. no. 10206 - TC Set with 2 sensors TT/S2 PT1000	Art. no. 10306 - TC Set with 3 sensors TT/S2 PT1000

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WMC

Heat Metering Controller

For solar- and heating systems. For non-officially calibrated heat metering via flow and return temperature as well as system flow.

Menu languages (additional languages on request)

WMC	
TemperaturSensor inputs	6
Flow based heat metering via Grundfos direct sensor (VFS)	1-2
Pressure monitoring (Grundfos RPS sensor) 1	1
Relay outputs 230V for error messages	2
Relay outputs 230V for pressure monitoring	1
Adjustable additional functions for free defi nable outputs	4
LEDs red/green for display of operating status	✓
Battery-backed Real Time Clock	✓
Statistics and graphic analysis of data memory	✓
Setup wizard	✓
Function control and error memory with date and time	✓
Menu blocker	✓
Power supply for universal voltage range (100...240VAC) and reduced standby consumption	✓
Dimensions Height x Width x Depth	115mm x 86mm x 45mm
Housing Color	RAL 9003
Protection Class	IP 40
Mounting Hardware, Spare Fuse and User Manual	✓

Art. no. 75003 WMC Heat Metering Controller
Art. no. 75003

Art. no. 75213 WMC Set with VFS1-12 and 1 sensor TT/S2 PT1000
Art. no. 75213

Art. no. 75223 WMC Set with VFS2-40 and 1 sensor TT/S2 PT1000
Art. no. 75223

Art. no. 75233 WMC Set with VFS5-100 and sensor TT/S2 PT1000
Art. no. 75233

Art. no. 75234 WMC Set with VFS10-200 and 1 sensor TT/S2 PT1000
Art. no. 75234

Accessories

Electric 3-way zone valves of the ESBE series ZV are suitable e.g. for hot water / heat changeover or for other changingover processes in thermal solar and heating systems.

operating voltage:	230 VAC
power consumption:	6VA
max. pressure:	PN10
max. temperature:	94°C
size:	20mm/25mm
connections:	internal thread

Zone valves	
Art.-Nr. 76201	Zone valve ZV3-20
Art.-Nr. 76202	Zone valve ZV3-25

Mixing valves of the ESBE series VTA3 are particularly suitable for the use at points of withdrawal, where a scald safe function is required, e.g. at solar storage units.

adjustable temperature:	35°C ... 60°C
max. pressure:	PN10
max. temperature:	90°C
size:	15mm/20mm/25mm
Connection:	female thread / male thread

Mixing valves	
Art.-Nr. 76301	Mixing valve VTA321 1/2" inside thread
Art.-Nr. 76302	Mixing valve VTA321 3/4" inside thread
Art.-Nr. 76303	Mixing valve VTA322 1" outside thread
Art.-Nr. 76304	Mixing valve VTA323 22mm compression fitting

The ESBE Actuator of the series ARA 600 is particularly suitable for the use of ESBE heating mixer valves

run time at 90° position:	2 minutes
torque:	5 Nm
operating voltage:	230 VAC
power consumption:	5VA
valid temp.of environment :	5°C ... 55°C

Actuator ARA661
Art. no. 76901

Matching ESBE 3 way mixing valves of type VRG131 made of brass with female thread

3 way mixing valves	
Art. no. 76101	VRG131 20 mm - 6,3 KVS
Art. no. 76102	VRG131 25 mm - 6,3 KVS
Art. no. 76103	VRG131 25 mm - 10 KVS
Art. no. 76104	VGR131 32-16 RP 1 1/4"

Matching ESBE 4-way mixing valve of type VRB 143 made of brass with female thread

4 way mixing valves	
Art. no. 76105	VRB143 20-4 KLF 22mm
Art. no. 76106	VRB143 25-6,3 KLF 28mm

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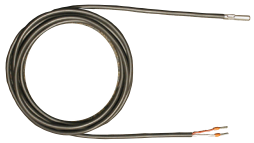
Accessories

Temperature sensors with PT1000 sensor elements - with guaranteed degree-accuracy according to DIN EN60751 (IEC751) - ensure precise recognition of the temperature difference and optimum use of energy.



Art. no. 85220 - TT/S2 temperature immersion sensor with 2 m siliconee cable, 180°C	Art. no. 85240 - TT/S4 temperature immersion sensor with 4 m siliconee cable, 180°C
Art. no. 85140 - TT/P4 temperature immersion sensor with 4 m PVC cable, 95°C	Art. no. 86325 -TT/T2.5 temperature immersion sensor with 2,5 m special cable, 220/300 °C
Art. no. 81220 - TR/S2 temperature pipe sensor with 2 m siliconee cable, 180°C	Art. no. 81140 - TR/P4 temperature pipe sensor with 4 m PVC cable, 95°C
Art. no. 82220 - TF/S2 temperature flat contact sensor with 2 m siliconee cable,180°C	Art. no. 83140 -TD/P4 temperature tertiary sensor with 4 m PVC cable, 95°C
Art. no. 85256 - TT/S5 TP6 temperature immersion sensor with 5m silicone cable for swimming pool applications	Art. no. 85216 - TT/S10 TP6 temperature immersion sensor with 10m silicone cable for swimming pool applications

TA52 temperature external sensor box

Art. no. 87000-TA52 temperature external sensor box

Accessories

Immersion sleeves R 1/2" with PG7 cable threading and siliconee seal, in various lengths and designs.

Art. no. 91030 - TH30 with 30mm brass immersion pipe, 150°C	Art. no. 91045 - TH45 with 45mm brass immersion pipe, 150°C
Art. no. 90060 - TH60 w/ nickel-plated 60mm copper imm. pipe, 150/180 °C	Art. no. 90100 - TH100 w/ nickel-plated 100mm copper imm. pipe, 150/180 °C
Art. no. 90150 - TH150 w/ nickel-plated 150mm copper imm. pipe, 150/180 °C	Art. no. 90200 - TH200 w/ nickel-plated 200mm copper imm. pipe, 150/180 °C
Art. no. 90300 - TH300 w/ nickel-plated 300mm copper imm. pipe, 150/180 °C	Art. no. 90400 - TH400 w/ nickel-plated 400mm copper imm. pipe, 150/180 °C
Art. no. 92100 - TH100E stainl. steel imm. sleeve 100mm, test prod up to 300°C	Art. no. 92150 - TH150E stainl. steel imm. sleeve 150mm, test prod up to 300°C
Art. no. 92200 - TH200E stainl. steel imm. sleeve 200mm, test prod up to 300°C	

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Accessories

VFS sensor for combined flow and temperature measurement

- no moving parts in the flow
- minimal permanent pressure loss
- no increasing measurement deviation due to wear-out
- „2 in 1 Sensor" - flow and temperature in one sensor

Available in 1,2-12 l/min, 2-40 l/min, 5-100 l/min, 10-200 l/min in stainless steel tube and 20-400 l/min in plastic tube

VFS 1-12L/Min 0-100°C, 3/4"AG, stainless steel Art. no. 78012	VFS 2-40L/Min 0-100°C, 3/4"AG, stainless steel Art. no. 78040
VFS 5-100L/Min 0-100°C, 1", stainless steel Art. no. 78100	VFS 10-200L/Min 0-100°C, 1 1/4" stainless steel Art. no. 78200
VFS 20-400L/Min 0-100°C, 1 1/2" plastic Art. no. 78400	

RPS - sensor for combined pressure and temperature measurement

- no moving parts in the fluid
- precise pressure sensor, temperature compensated and linearized
- „2 in 1 sensor" - pressure and temperature in one sensor

RPS - sensor 0-10 bar 2,9m cable Art. no. 78600

Accessories

External relay 1W 10A
In protective casing, to be used where e.g. outputs of the controller shall be operated potential-free, the control power of the controller is not sufficient or a switch-over contact is required instead of a make contact.

coil voltage	230VAC
max. switching voltage	250VAC
switching contacts	1 change over contact
max. switching current	10A at AC1
case protection category	IP54

Relay IFR/1W

Art. no. 77500

External relay 4S 24A
In protective casing, to be used where the control power of the controller is not sufficient or multipolar switching is necessary, e.g. 3 pole electric heating rods.

coil voltage	230VAC
max. switching voltage	400VAC
switching contacts	4 closing contact
max. switching current per contact	24A for AC1
case protection category	IP30

Relay 4S x 24A

Art. no. 77501

External relay 1W 6A
in protective casing, to be used where the 0-10V outputs of the controller shall be operated potential-free

coil voltage	9-12VDC
max. switching voltage	250VAC
switching contacts	1 change over contact
max. switching current	6A at AC1
case protection category	IP54

Relay 1W 6A

Art. no. 77502

Prices ex works, excl. sales tax. Terms and conditions as can be seen on sorel.de shall apply. Discount on request.
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Accessories

Overvoltage protection for collector sensor in 90x35x38mm conduit box

Art. no. 77600 - KA12 Overvoltage protection for collector sensor in 90x35x38mm branch box

100 pieces fuse 2A isolated, slow blow, boxed

100x fuse 2A slow blow

Art. no. 02125

IP44 Seal Set for SOREL housings H 163mm W 110mm D 51mm

IP44 seal Set

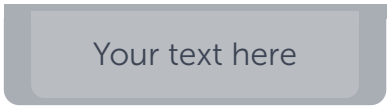
Art. no. 06442

OEM CUSTOMIZATION

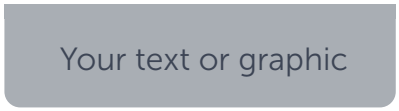
Special net prices, no discounts

STDC front label, plastic, up to 4 colours

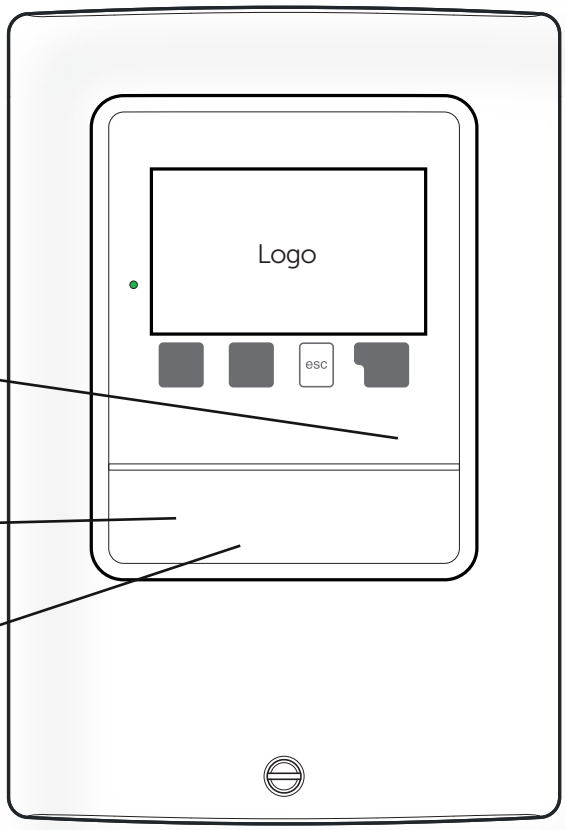
TDC/HCC.. front label, paper Paperstrip in a transparent plastic window



TDC/HCC front label, plastic, up to 4 colours



Company logo in display at startup



Personalisierung

Customized barcode and type decals (size 70 x 22 mm)

Sensors in labeled plastic bags

Labeling of box/package/bag (size 70mm x 25,4mm, black & white)

Pre-wiring of the controller

Customer-specifi c software adaptations, e.g. pre-settings or modifi ed control functions

Customised manual (customer's logo, name, address, contact information)

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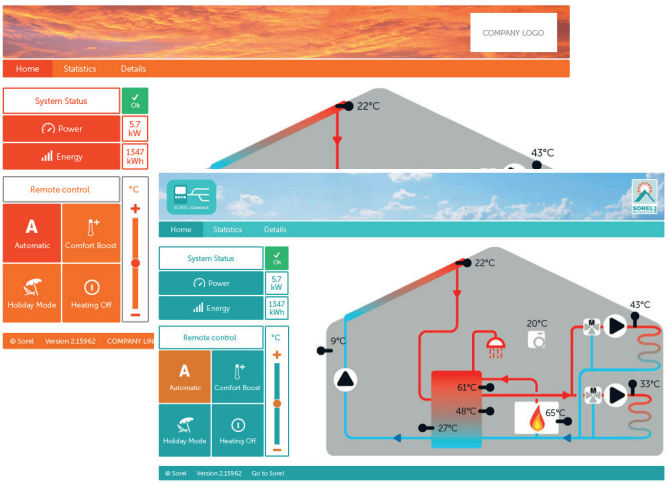
OEM CUSTOMIZATION

Special net prices, no discounts

Customized SOREL Connect Page



Art. no. 77770 SOREL Connect Page - Adaption of header (graphics, logo), sidebar (colour, text) and footer (text, link and colour)

Presetting Controller

Manual presetting of the controller adapted to the system of the customer. The price includes a simple sheet with allocation of the appliances like pumps and valves and the temperature sensors.

Art. no. 06899

SOREL GmbH Mikroelektronik

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Amtsgericht Essen
HRB 15326

USt-Id-Nr. DE 125 315 635

Supported by:

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of Economics
and Technology

on the basis of a decision
by the German Bundestag

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General notes:
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The illustrations should be viewed only as schematic diagrams showing the respective hydraulic systems, and do not claim to be complete. The controller does not replace safety devices ander any circumstances. Depending on the specifi c application, additional system components and safety components may be mandatory, such as check valves, non-return valves, safety temperature liwithers, scalding protectors, etc., and must therefore be provided.

The quoted prices are to be anderstood per unit ex works (EXW according to Incoterms) Sprockhövel plus VAT. Standard customer discounts apply to orders over 50 €. Freight costs are charged depending on the required workload. Discounts are granted upon written request. The current terms and conditions of SOREL GmbH Mikroelektronik as can be seen on www.sorel.de shall apply. Actual products may differ from images. All rights reserved.